

The Rhetoric of AIDS Policy in South Africa

by

Marcus Paroske

B.A. in Political Science and Philosophy, Regis University 1997

M.A. in Speech Communication, Colorado State University 1999

M.A. in Philosophy, University of Pittsburgh 2005

Submitted to the Graduate Faculty of
Arts and Sciences in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

University of Pittsburgh

2006

UNIVERSITY OF PITTSBURGH
FACULTY OF ARTS AND SCIENCES

This dissertation was presented

by

Marcus Paroske

It was defended on

December 9, 2005

and approved by

Lester Olson, PhD, Professor

Gordon Mitchell, PhD, Associate Professor

Lisa S. Parker, PhD, Associate Professor

Dissertation Director: John Lyne, PhD, Professor

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University of Pittsburgh, 2005

This dissertation examines the rhetorical dynamics of South African AIDS policy under President Thabo Mbeki. From 1999-2004, Mbeki bucked global consensus surrounding the etiology and treatment of AIDS and prohibited government distribution of anti-retroviral drug treatments. In defense of these policies, the President offered scientific arguments founded on the theories of Western “AIDS dissenters.” He also made the case that South Africa’s unique experiences under apartheid demanded a strong tolerance of dissent and debate. The international condemnation of these views was striking.

Over the course of the controversy, rhetoric played a central role in shaping the views of both sides. Advocates marshaled public arguments in response to the exigencies of the controversy. Contextual constraints also forced the rhetors to adapt their messages. Each chapter of this dissertation examines a different rhetorical element of the controversy. They include the cultural context of South Africa’s transition to democracy, the development of AIDS dissent in the Mbeki administration, the early development of AIDS dissent in the West, the technical clash of scientific arguments in Mbeki’s Presidential AIDS Advisory Panel, and indigenous social movement resistance to the government’s policies.

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PREFACE

I would like to recognize the many individuals who have helped this project come to fruition. The arguments developed here were forged in numerous conversations with colleagues and mentors throughout my education. Rather than risk omissions, I will thank collectively the students from the 11th floor of the Cathedral of Learning for years of comments. In particular, though, I am indebted to Omri Ceren and Eli Brennan for their long hours of dialogue about my work. Lisa Keranen has been both mentor and cherished friend. Ron von Burg and Alessandra Beasley have been not just my most frequent sounding boards over the years, but my best friends as well.

Faculty at the University of Pittsburgh have also been instrumental in this work and my education overall. Jonathan Sterne and Henry Krips have helped hone my craft through several seminars. Gordon Mitchell has provided scholarly opportunities and encouragement that were instrumental in my development. Lisa Parker has selflessly gone beyond the call of duty as outside member, especially in the preparation of this document. John Lyne has been an intellectual example throughout my entire academic career. His stewardship as advisor of this project has helped tremendously.

One typically saves the most important acknowledgement for last. No exception here. Michelle Silva has added more to my life than anyone or anything else. Everything I will ever accomplish is dedicated to her.

1.0 CHAPTER ONE

One of the most powerful stories of freedom in history unfolded during the waning years of the twentieth century. South Africa, long the symbol of colonial oppression, had shed the manacles of apartheid after decades of struggle. From the inevitability of repression under minority rule, the country began its transition into an uncertain new life. While the moral legitimacy of the new regime was assured by the presence of Nelson Mandela at its helm, the policy challenges that would face the fledgling democracy were daunting. As it so happened, a plague lay dormant, known only to a prescient few. The Acquired Immunodeficiency Syndrome (AIDS) would strike South Africa, most cruelly, right after the moment of its greatest triumph.

And AIDS itself was also an enigma. The science of the disease, retrovirology, was new and uncertain. Important scientific factors such as the disease's etiology, methods of transmission and treatment were speculative. A debate in the Western world about AIDS that had been quietly, occasionally raucously, taking place challenged the entire received view of the disease. Nevertheless, the Western world had come to the conclusion that the science of AIDS was certain enough to justify aggressive health policies to fight the disease. But a handful of dissenters remained, and their texts proliferated on the Internet. Even with all of the disagreement about AIDS, at least one thing was incontrovertible. Something was killing hundreds of thousands of Africans, South Africans most especially, and all signs pointed toward pandemic death tolls in the coming decades on the continent.

In 1999, one further enigmatic element was added to the puzzle. Replacing South Africa's beloved Mandela as President was Thabo Mbeki. His credentials as a freedom fighter were uncontested, but his skills as a policy maker were not generally known. Questions about his leadership style quickly transformed into derision when, several months after his inauguration, President Mbeki shocked the world by embracing the seemingly discredited AIDS dissenters and refusing to distribute anti-retroviral (ARV) drugs to his people.

Transitioning from apartheid to multi-racial democracy, invaded by a deadly disease that little was known about, and ruled by a man who by all accounts was intelligent and capable and yet held a view on AIDS that seemed preposterous to most, South Africa and its health policy faced an uncertain future. And from uncertainty rhetoric is born. The several years following Mbeki's controversial articulation of AIDS dissent saw a number of important instances of scientific rhetoric emerge. Criticisms of the President from leading scientists, the use of science by social movements to protest the government, and the report of an expert advisory panel all joined Mbeki's own scientific rhetoric to create a mosaic of public arguments addressing the central theme of crafting science policy during an epidemic.

The following dissertation will examine these arguments as they appeared in public speeches, government documents, the press, and technical scientific forums about one of the most important instances of disputed science policy formation in recent memory. But the case's mix of science and politics also provides opportunities for fruitful theoretical development. In particular, the debate surrounding the formation of AIDS policy in South Africa involves the challenge of choosing between competing claims to scientific knowledge. Adapting messages to contexts and audiences and evaluating those arguments are at the core of both this case and rhetorical theory.

Fundamental to this controversy is the question of when to end debate in the interests of facilitating action. Scientific controversies in particular must wrestle with this issue. The fallibility of science demands that counter arguments to any theory or hypothesis must be scrutinized. What happens, though, when this inquiry holds up action in the face of a crisis? On what grounds may we dismiss a call for further evidence as dilatory, instead accepting the available evidence before us? Answering those questions requires the judgment of arguments in the face of uncertain knowledge. That is a rhetorical process, one that this dissertation will illuminate.

In this first chapter, a justification for examining South African AIDS policy rhetorically will be offered. After that, a brief historical overview of the case will be offered, along with a review of the literature presenting salient scholarly issues implicated in the forthcoming analysis. Then, several methodological issues encountered when analyzing scientific arguments in a post-colonial context will be addressed. The first chapter will close with an extensive preview of the rest of the dissertation.

1.1 JUSTIFICATION FOR THE STUDY

It may go without saying, but it is important to remind ourselves just how consequential a subject matter for scholarly attention is AIDS. It is a key phenomenon to study from a humanistic level, not only as a disease but as a cultural force. In their challenge to political scientists to study the disease, Sherrill, Somerville, and Bailey (Sherrill 1992) urge that scholars “should not pass up an opportunity to examine a case characterized by rapidly changing events, symbolic richness, shifting alliances and disparate nations and groups—a subject that cuts across race, gender, sexual orientation, class, and national boundaries” (688). Studying the invention of rhetoric

surrounding such a case has the potential to be especially fruitful. In fact, intercultural AIDS policy formation borders on the paradigmatic for addressing issues that fundamentally concern those interested in communication and rhetoric. At the heart of the controversy is the challenge of crafting arguments that appeal to disparate audiences when knowledge is uncertain and the perceived need to act is high.

AIDS in Africa in particular should be a matter of maximal concern to scholars. The human toll is almost too staggering to conceptualize. As a result of the disease, life expectancy in Africa is currently estimated to be 33 years (Davies 2004). According to the World Health Organization (Marshall 2004), five million South Africans, eleven percent of the entire population, are HIV positive, making it the world's most infected nation.¹ While nations and non-governmental organizations have devoted billions of dollars of aid to fight the disease, and the problem is only going to spread. AIDS proliferation is a matter of pressing concern to nations across Central and Southern Asia and throughout Latin America. At the very least, the challenge of how to address the spreading epidemic will arise in these areas. And it is quite possible that AIDS dissent itself may become a direct issue in some of these disparate contexts. The content of this dissertation will not only help us to understand how AIDS policy developed in South Africa, but may also shed light on future policy contexts.

The policy issues in this case are dominated by contested claims to knowledge and raise important epistemological questions. The study of how rhetoric mediates between knowledge and policy has been advocated for a number of reasons. Steve Fuller (Fuller 1988) has perhaps most forcefully defended policy studies as a shared point of interest between the study of social epistemology and rhetorical studies. Some rhetoricians of science have made a turn toward

¹ Current projections have the number of infected in China and India eclipsing South Africa in the near future, however.

policy studies. These include Craig Waddell (Waddell 1990) in his article “The Role of *Pathos* in the Decision-Making Process: A Study in the Rhetoric of Science Policy” and William Kinsella (Kinsella 1990) in “A ‘Fusion’ of Interests: Big Science, Government, and Rhetorical Process in Nuclear Fusion Research.” Since policy argument is rooted in deliberative institutions and involves public input, it is easy to see how the rhetoric of science policy is a legitimate object for analysis.

A cognate area for the study of public scientific argument is controversy studies. Sociologists of science have long argued that such disputes are fruitful occasions for scholarly analysis. Thomas Brante (Brante 1993) offers one of the most persuasive calls for the study of scientific controversies, which he defines as those “primarily concern[ing] contending *knowledge claims* [emphasis in original] where at least one of the parties has scientific status” (181). He argues that focusing on controversies exposes the hidden assumptions undergirding claims to knowledge, raises socially and politically relevant issues in scholarship and brings the nature of expertise and objectivity into critical view. The elements of such controversies that he believes makes them good candidates for study abound in this case. Englehardt and Caplan (Englehardt 1987) have argued for specifically focusing on the resolution of scientific controversies at the policy level. These controversies lie at the intersection of science, ethics, and politics. Scholars should study “under which circumstances different forms of rationality are pursued with success or failure, as well as where, for extra-epistemic considerations, particular controversies come to a close” (2). Both the use of competing epistemologies of science and the influence of cultural dynamics on policy rhetoric will be hallmarks of this dissertation’s analysis of the South Africa AIDS debate.

Public controversies are of interest to students of argument. Goodnight (Goodnight 1992) has contended that controversies are times when the normal patterns of public communication are altered by opposing arguments. The controversy becomes rhetorical when the process through which public decisions are made is disrupted (Phillips 1999). Rhetoricians, in this view, make their most fruitful analyses of moments where public argument is anomalous and decision making difficult. Certainly the South African AIDS dispute is such an example, with public decision making at the crux of the entire controversy.

This dissertation, then, adds to a growing body of case studies on public controversies. For example, Olson and Goodnight (Olson 1994) examine the rhetoric surrounding the fur industry. Both Phillips (Phillips 1999) and Goodnight (Goodnight 1999) separately examine Congressional debates over an African burial ground. Other studies include Jacqueline Bacon's (Bacon 2003) essay on reparations for the descendants of American slaves, Katherine Olson's consideration of controversies in Presidential rhetoric (Olson 1989), Delicath and Deluca (Delicath 2003) on radical environmental rhetoric, Josh Boyd's (Boyd 2002) review of the regulatory process of the FDA, and Gordon Mitchell's (Mitchell 2000) take on the rhetoric of missile defense.

Another important part of the rhetoric literature looks at how judgment is used when making decisions about public policy. Studies addressing this issue include James Jasinski on the ratification of the American Constitution (Jasinski 1992), James Farrell on the rhetoric surrounding Fisher Ames (Farrell 1990), Douglas Walton on definitions in public policy argument (Walton 2001), and Nola Heidlebaugh on incommensurability in policy argument (Heidlebaugh 2001). Of course, the literature on AIDS as a rhetorical phenomenon is important as well. Among those studies are Fabj and Sobnosky on AIDS activism (Fabj 1995), James

Darsey on AIDS dissent as conspiracy theory, (Darsey 2002), Elli Lester on AIDS morality and the press (Lester 1992), Alex Preda's on public AIDS health campaigns (Preda 2005), and William Elwood's edited volume on AIDS and political campaigns (Elwood 1999). All of these areas of the science studies and rhetorical literature have contributed to this project. To begin, we now turn to a sketch of the controversy at hand.

1.2 HISTORY OF THE CONTROVERSY

For the most part, the international community agrees on the question of what causes AIDS and how best to treat it. And while there is a nearly unanimous global consensus on the importance of tackling the epidemic (if not the commensurate political will to effectively implement that consensus), there remains a minority faction within the scientific community that not only questions the preferred methods of treatment for AIDS, but also the basic virological account of the disease itself. AIDS dissent, broadly construed, is the belief that common assumptions linking the Human Immunodeficiency Virus (HI Virus or HIV) to the acquisition of AIDS are false. This dissent is usually linked with the question of whether anti-retroviral drug treatments are safe and effective against AIDS. The position's defenders are called "AIDS Dissenters," and they include scientists, medical doctors, activists, and some patients.

The phenomenon of AIDS dissent was an interesting but largely politically impotent fringe movement until the dissidents caught the ear of Thabo Mbeki. International attention turned toward the Mbeki government and its policy concerning AIDS after it announced in 1999 that it would not distribute ARV drugs and transmission inhibitors to pregnant women, including rape victims, without further study of their effectiveness and safety. In a speech before his

Parliament's second chamber, the National Council of Provinces, on October 28, 1999, Mbeki asserted that "there...exists a large volume of scientific literature alleging, among other things, the toxicity of this drug is such that it is in fact a danger to health" (Associated 1999). While observers had noted Mbeki's reluctance to adopt proactive policies to combat AIDS in the past, this speech was the first major public statement of Mbeki's growing dissent from the AIDS orthodoxy. The "large volume of scientific literature" that Mbeki alluded to was in large part gleaned from the Internet, in particular sites run by famous AIDS dissenting retrovirologists Peter Duesberg and David Rasnick.

The shock of Mbeki's announcement was compounded by the fact that Durban was poised to host the International AIDS Conference the following summer. Africa was set to dominate the agenda of the meeting of the world's most preeminent AIDS scientists. In March 2000, Mbeki deepened his commitment to further debate on the question of providing ARV drugs to his people and announced his intention to form his own international panel of scientists to reappraise the evidence surrounding AIDS. The Village Voice (Schoofs 2000) quoted Presidential spokesperson Parks Mankhalana, saying that the panel was charged "to look into 'everything about AIDS,' from the merits of various treatments such as AZT to 'whether there's this thing called AIDS, what it is, whether HIV leads to AIDS, whether there is something called HIV, for an example. All these questions.'" This panel was explicitly to include AIDS dissenters, including Duesberg and Rasnick. The panel met, and its findings are themselves a fascinating moment in the rhetorical development of the controversy (see chapter 4).

The subsequent pressure, both internal and external, on Mbeki to change his views grew for over three years. Domestic social movements continually challenged Mbeki's policies, staging protests and civil disobedience throughout the country. Mbeki even stood in defiance of a

South African Supreme Court order to provide ARV drugs for several years. Finally, in August 2003, and with parliamentary elections looming the following April, Mbeki acquiesced and announced his government's intention to provide the medicines. However, his long-term commitment to that drug program remains to be seen (see Chapter 5). This arc, from initial dissent to eventual recapitulation, provides a chronological structure to this dissertation and allows for drawing conclusions about the case.

1.3 REVIEW OF THE LITERATURE

An article-length attempt to explain President Mbeki's AIDS rhetoric has recently been offered by Theodore F. Sheckles (Sheckles 2004). He argues that Mbeki engages in "strategic scapegoating," blaming Western pharmaceutical companies and politicians for the disease in order to unite South Africans behind his administration. The rhetorical potency of such unifying strategies is shown by Sheckles' earlier analysis of Nelson Mandela's failure to use the techniques in the waning years of his administration (Sheckles 2001). Sheckles sees this scapegoating not as a cynical political move, but as a sincere extension of Mbeki's post-colonial mindset and radical experiences fighting apartheid, even if the technique ends up serving his political interests in the process. Sheckles maintains that it was natural for Mbeki to distrust the Western orthodoxy on AIDS and that his attempts to question the HIV/AIDS link were sincere. As a result, Sheckles concludes that "viewed as both a strategy to draw attention to some important dimensions of AIDS in Africa and as a strategy to unify the South African population behind his government, the 'campaign' was somewhat successful" (80).

The article makes many careful and important points. But the analysis is incomplete in several important ways. Sheckles is focused on questions of the truth value of Mbeki's views on AIDS and not on the policy consequences of those views. As a result, Sheckles casually passes over the pragmatic effects of Mbeki's decision to debate the etiology of AIDS:

Mbeki's position may have delayed AZT and other drug therapies a bit (until the government could declare them safe). . . . However, it is important to note that, should AZT and other anti-retroviral drugs prove lethal, then the delay would be praised and Mbeki declared heroic for saving lives. It is also important to note, as Mbeki constantly reminded his various audiences, that all other components of the nations' anti-AIDS effort were moving full-speed ahead (80).

Sheckles puts the policy consequences of Mbeki's rhetoric, including the formation of his Presidential Advisory Panel and his refusal to disperse ARV drugs, at the periphery of his analysis. He sees Mbeki's five year flirtation with AIDS dissent as having a marginal impact on the fight against the disease in South Africa, and therefore of little interest in an analysis of the President's rhetoric. I will argue that the policy consequences of Mbeki's rhetoric were actually at the heart of the dispute between him and Western scientists. Rather than delaying drugs "a bit," Mbeki's government outlawed their distribution to the poor for a significant time. And the President's rhetoric was specifically targeted to address the concerns of his critics about those very policy outcomes. Not an afterthought as Sheckles sees it, this case actually depends on the issue of drug policy. This dissertation will provide that focus and a more complete reading of the case than has yet been offered.

1.4 DISSERTATION PREVIEW

To make that reading, the dissertation is divided into several chapters that each examine a major rhetorical moment in the public debate over AIDS dissent and AIDS policy, in both South Africa and the Western world. While the contextual circumstances dictating each exchange differ, a constant throughout the entire controversy is the interplay between public and technical claims to scientific knowledge and warranted science policy. At various moments over the life of the controversy, different rhetors came to the forefront and responded to different challenges. Each chapter takes up the issue from a different angle, providing a panoramic view of the entire affair, be it the community of Western scientists, the President of South Africa, social movements opposed to government policies, or ad hoc panels of experts.

In the second chapter, we will analyze the early foundations and subsequent development of President Mbeki's AIDS dissent. Using his letter to world leaders in 2000 as a primary text, the chapter contextualizes the development of the President's views within the broader political history of AIDS in South Africa. In the third chapter, the dissertation steps back two decades to explore the early development of AIDS dissent in the United States. That analysis will allow us to understand two important issues. At one level we will consider how the attitudes of Mbeki's orthodox scientific critics were shaped by their prior experience both with AIDS as a cultural force and with the early AIDS dissenters. Second, the chapter will examine how AIDS dissent, finally discredited in the West, migrated from the technical forums of scientific conferences and journals into the public rhetoric of lay advocacy of which Mbeki himself was a practitioner in South Africa.

In the fourth chapter, the dissertation returns to debates between credentialed scientists to analyze the rhetoric of the report drafted by Mbeki's AIDS Advisory Panel. That report serves

two functions for this dissertation. It is an artifact of a direct and adversarial exchange of arguments between orthodox and dissenting AIDS scientists specifically related to South African AIDS policy, and thus affords the opportunity to study how direct clash raises rhetorical challenges to two sides. Second, the report is itself an example of the challenges involved in generating consensus about science policy when opposing sides hold opposite and irreconcilable views on the certainty of our knowledge about the issue. In the fifth chapter, the dissertation will take up the mounting rhetorical pressure on Mbeki from his own people to augment his position. The reasoning of South Africa's Supreme Court as to the inadequacy of the evidence supporting HIV as the etiological agent for AIDS and the efficacy of ARV treatments will be discussed. The chapter will also discuss the social movement rhetoric of the Treatment Action Campaign, the main rhetorical opponents of the government's policies. That analysis will invite discussion of the epistemological status of the infected in these science policy debates. In the final chapter, the dissertation will offer some theoretical reflect on what this case study tells us about studying scientific policy rhetoric across cultural boundaries and highlight prospects for further research.

The remainder of this first chapter considers the complicated issues of knowledge and culture that are dynamically in play in the present case. The historical treatment of South Africa's majority by both their apartheid master's and their colonial rulers, the impact of an AIDS epidemic on a developing nation, and the personal history of the man at the center of analysis itself are all variables that beg for attention before the analysis begins. Addressing those issues is next on the agenda.

1.5 CRITICAL PERSPECTIVE

The confluence of cultures in the South African AIDS case requires attention to the author's orientation toward the object of study. From a series of different literatures, the prospects and problems of addressing rhetoric born in the aftermath of colonial oppression have been examined. In the case of South African AIDS policy, the problems are compounded because much of the disagreement directly involves clashes between Western and African *ways of knowing*. In particular, some claims to scientific knowledge and political praxis in this case overtly cite culturally specific epistemological perspectives. Does being South African mean one sees the world, and even AIDS science, differently from a Westerner? Assessing such claims can be complicated. For guidance, I will turn to several different literatures.

1.5.1 Post-Colonialism

One of the key methodological considerations for the communication critic involves, as Raka Shome (Shome 1996) has noted, a self-reflexivity regarding how Western assumptions impact our readings of texts produced by victims of colonial oppression (apartheid in this case). It might be tempting to slip into an easy criticism of Mbeki and his policies as backward. Indeed, much of the visceral popular reaction to Mbeki derisively focused on his claims that there was something scientifically unique about African AIDS, taking for granted that such a claim must be the product of ignorance. Historical criticism of African rhetoric by Western observers is rife

with similar immediate and negative reactions, without careful attention to claims from the perspective of the rhetor.

There are several ways in which this dissertation avoids that problem. First, as much as is practical, descriptions of South Africa and its experience with AIDS are taken from scholarly and journalistic accounts by indigenous writers. Second, the dissertation avoids making judgments on the *truth* of the arguments of either side. Indeed, which side is correct scientifically is a question that is beyond my expertise to answer definitively.² Rather than make such judgments, the approach will be more rhetorical. Rather than critique either side for being wrong, the dissertation will ask in what ways did the arguments of both sides respond to each other, their audiences, and the exigencies of the moment? Using standards of evaluation that are implied by the worldview of the advocates themselves avoids the imposition of Eurocentric epistemological standards, or even Western standards of what counts as “legitimate science” on an African rhetor.

But even then, there remains the problem of a Western observer making pronouncements on a culture that is not his own, even after careful study from afar. However, the case of South African AIDS policy is one where most of the important rhetorical exchanges about AIDS policy occurred between South Africa and the West. Mbeki rarely articulates his views for an exclusively African audience. Instead, he speaks to Western politicians and scientists, and often in the language of Western science. The rhetoric by him taken up by this dissertation occurred in letters to Western leaders, international conferences of scientists, and global media outlets. His critics, likewise, address an international audience in their responses. By limiting the present

² In the interests of self-reflexivity, I will note my personal views on AIDS science. I am confident in my lay opinion that HIV causes AIDS, that anti-retroviral drugs are currently the best treatment for the disease, and that governments everywhere should aggressively make drugs available to their people. Given these beliefs, I will attempt to fairly consider all sides of the argument on their own terms.

analysis to these moments of cultural interface, the distinction between Western and African cultural patterns of knowing becomes the centerpiece of the criticism. Rather than imposing one criterion on all of the arguments, the clash of different criteria is the point. As a result, the prospects of a Eurocentric reading of the controversy are minimized. To guide the analysis of the African foundations of Mbeki's AIDS rhetoric, we may turn to another set of communication theories.

1.5.2 Afrocentrism

It is impossible to assess African rhetoric without considering the groundbreaking work of Molefi Kete Asante. His conception of Afrocentrism seeks to purge the effects of Eurocentric viewpoints from the analysis of African texts. Rather, he urges "placing African ideals at the center of any analysis that involves African culture and behavior" (6). Such a project is tricky in the case of Mbeki, however. He himself only partially bases argument on African culture or experience. The President invokes the Western lessons of the treatment of Galileo just as freely as he invokes the South African lessons stemming from the legacy of apartheid. And Mbeki is not speaking primarily to African audiences in the examples covered in this dissertation. Many of the tropes and rhetorical techniques Asante isolates as indicative of African rhetoric simply are not to be found in Mbeki's arguments.

It is Asante's work in intercultural communication that provides a better roadmap for our task. He (Asante 1983) directly tackles the question of how Africans communicate with Westerners, the primary phenomenon in the AIDS policy disputes considered here. Asante argues that the issue of "intercultural communication at the international or national level is a matter of power" (4). Only by recognizing the inherent hierarchies between interlocutors in

these contexts can we meaningfully analyze those exchanges. We should note that in South Africa, the direct power imbalances between Africans and Westerners that linger from the oppression of apartheid are among the deepest and the freshest on the Continent. This dissertation heeds Asante's advice by foregrounding the influence of the historical legacy of apartheid on the foundation of argument from an African like Mbeki, as well as in the responses to him from Western critics.

When dealing with issues of science and technology, the problem of power is exacerbated. The indubitability of scientific knowledge is often taken for granted by Westerners. The less developed status of a nation like South African is easy to equate with backwardness or ignorance. One may potentially privilege Western notions of progress and technological development when examining Africa. Thus, even when critics may be trying to champion the continent by advocating modernization or development, they run the risk of "pathologizing" Africa (Owomoyela 1994). Assuming that increased prescribing drugs for a disease like AIDS is the result of a Western scientific consensus on their value runs the risk of delegitimizing African solutions to the problem before they have even been considered. The critic of rhetoric is susceptible to the same trap. When assessing an argument that could be regarded as "anti-scientific," it is important to avoid unproblematically assuming that the more scientific side is the correct one. Making power differentials a key point of the analysis, and avoiding prejudicial dismissal of a scientific argument before fully understanding the argument's context avoids the previously discussed failings of the criticism of African rhetoric. Having recognized the potential biases of the critic and the inherently inequitable power position from which African rhetoric, and especially its scientific rhetoric, emanated, we can now consider a hermeneutical approach to texts up.

1.5.3 Rhetoric of Science

Analyzing the rhetoric of scientific texts offers unique challenges to the critic. A method for such readings is offered by William Keith (Keith 1997). He describes a process of “reverse engineering,” whereby an engineer takes apart some piece of working machinery in order to see how it was successfully put together. He argues that the same logic can apply to analyzing persuasive discourse. A text, like a well engineered piece of machinery, is the “outcome of an intelligible process; ‘intelligibility’ here means a sense that some sort of vaguely rational means-end thinking went into the designing of the thing. This is precisely the sort of thinking that the engineer could understand and therefore reconstruct” (236). Retrace the intelligible choices of the rhetor, and a rhetorical criticism emerges. While Keith focuses on successful rhetoric, there is no reason to believe that a similar approach would not work for arguments that failed. What strategic choices did the rhetor make that lead to the negative reception of the argument?

Keith cautions that his method cannot offer a complete or total read of the text. The criticism that the reverse rhetorical engineer produces is a plausible but never exclusive account of the argument. His method recognizes especially that the entire context from which rhetoric emerges can never be grasped by the critic. Keith believes that our analysis must limit the claims it makes. It “*will view texts as sets of strategic responses to the constraints that obtain for them* [emphasis in original], without making the leap from redescription-as-strategy to redescription-as-reconstruction of psychologically real intentions” (239). We have already begun to delineate the constraints placed on South African rhetors by the history of racial oppression there and the challenges to a Western critic when analyzing their rhetoric. But following Keith’s lead, if we reverse engineer the ways that Mbeki and others attempted to answer those contextual challenges

through their rhetoric, we will arrive at a methodologically sound description of the arguments presented.

To that end, readers of this dissertation will note the central tenet that the differences between the President and his critics were strategically chosen to accomplish specific goals. Mbeki could easily have adopted orthodox science's take on AIDS; there was no lack of scientific literacy on his part that prevented him from doing so (the protestations of his critics notwithstanding). Mbeki instead purposefully invoked, albeit partially, an alternative scientific tradition. I will also argue that this case is not one, as it has often been characterized, of a small group of radical dissenters willfully ignoring the truth for their own nefarious reasons. Rather, it is a conscious attempt to address what those dissenters see as pressing deficiencies in the scientific community's knowledge about AIDS and the current standards of treatment for it. Both sides in the debate required rhetoric to accomplish their goals. Mbeki's rhetorical challenge was to justify his beliefs to his people and the rest of the world. The challenge of his critics was to change his mind in order to prevent what they saw as the looming prospect of a health catastrophe. Why and how these challenges arose, and in what ways the players responded to them, will be the motivating issues of the entire dissertation. In order to examine those challenges, the remainder of this chapter will examine South Africa's new democracy, the impact of AIDS on the continent, and the country's enigmatic President.

1.6 THEORIZING THE CONTEXT

1.6.1 Post-Apartheid South Africa

After World War II, South Africa's ruling white minority developed a system of governance known as "apartheid," which involved a legal and political separation of the black majority. Segregation of races manifested in both the Jim Crow of separate facilities for the races, as well as the creation of black "homelands" where blacks were forcibly relocated. The separation of the races and the intolerable discrimination that was the result of those policies made South Africa one of the least democratic and most racially polarized nations in the world for some fifty years. After decades of internal resistance and international pressure against the regime, apartheid finally fell in a national, whites-only referendum on March 17, 1992. The task then was how to construct a new, pluralistic government in the wake of such oppression.

The transition to a free South Africa has created unique constraints on and possibilities for the production of political rhetoric. Applying generalized rules about how politics ought to operate is difficult, since South Africa is currently in a "one of a kind" moment. As Ruti Tietel has recently argued (Teitel 2000), such contexts require a unique conception of "transitional justice" that is specific to each and every case. For example, South Africa's Truth and Reconciliation Commission was the sort of institution that best fit after the fall of apartheid, but that does not mean that such a policy should be implemented in post-Saddam Hussein Iraq. The particularities and nuances of abuse under any given regime will always be unique, and those differences command unique remedies for each context.

Several major problems that faced the new African National Congress (ANC) government were unemployment, malnutrition, inferior education, and inadequate health care for

blacks. All were the direct result of the previous government's economic and social welfare policies (Boyd 2002). The solution, in the eyes of the ANC, was the establishment of a new political culture that guaranteed basic human rights and asserted a new national identity. Such a system was indeed revolutionary given the history of minority rule in South Africa. It required a fundamental break with the old regime's institutions, laws, and perspective on justice. Indeed, the South African constitution that emerged from the transition out of apartheid is one of the strongest articulations of human rights, individual and collective, on the planet. But such structural reforms can only begin to address a cognate issue, the recovery of African identity after apartheid. The indigenous population was not only under-funded, but was systematically denied the power of self-determination. As we shall see, the question of what it means to be South African in a post-apartheid context was a cornerstone of Thabo Mbeki's political vision, and came to influence his views on AIDS. The controversy was not just about public health, but about how South African Blacks should orient themselves to the Western corporations and governmental institutions of fighting the disease that gain enormous profits in the process.

It seems clear, as Elias K. Bongmba (Bongmba 2004) has argued, that a reassertion of a new African identity after the fall of apartheid was vital for the rebirth of the Continent. And it was one of the top issues for Mbeki's administration. There was little evidence in his political vision that this project would be anything but pluralistic and multicultural. As Bongmba notes, Mbeki saw participation in global markets and domestic economic liberalization favorably, undermining arguments that the President was embarking on a mission of demagoguery or racial nationalism in his eventual AIDS dissent. Even though part of the South African identity construction had to be a reconnection with indigenous ways of knowing separate from those of the apartheid masters, there was no reason to think that this

task need necessarily be oppositional to Western science entirely. Indeed, it has been argued (van Niekerk 1999) that reliance on Western medical services to combat AIDS and other diseases could be an essential part of a uniquely African approach to the disease that avoids the narrow-minded racism and xenophobia of the European Renaissance. And yet, it is impossible to deny that the relationship between Africa and the West on the issue of AIDS had been poisonous in the past.

Indeed, AIDS has all too often been a locus of some of the most dehumanizing practices by the West. Paula A. Treichler (Treichler 1991) has documented Western bias against Africa during the initial investigations into the disease. All too often, stereotypes of Africans as unable to process public health messages, as naively reliant on traditional medicines, and as practitioners of deviant sexual acts have infiltrated scholarly and popular accounts of the disease. Many early tests of AIDS drugs on the continent were slipshod and contributed to a belief that Africa was a land of human guinea pigs available for pharmaceutical companies to conduct risky experiments on people, free of regulation.³ The overall impact is that mistrust of AIDS science is more prevalent than a Westerner might suppose.

As a case in point, consider accounts of the origins of AIDS. Most Western scientists subscribe to the view that HIV was introduced to humans through contact with chimpanzees carrying the simian retrovirus, or SIV. The virus then mutated into HIV and migrated to the West via human sexual contact. But many African critics see this origin story as another attempt to blame Africa for Western problems. As one account puts it, “given the racist stereotyping of black people as dirty, disease carrying and sexually promiscuous, it was virtually inevitable that black people, on the first sighting of the disease among them, would be attributed as its source”

³ Recent developments concerning safety studies by the National Institute of Health about the AIDS transmission inhibitor Nevirapine have only exacerbated this perceptions (see chapter 5).

(Chirimuuta 1989, 128). Some alternative theories to the SIV origin story include contaminated Western polio vaccine trials (Martin 1996), biological warfare against Africans perpetrated by the United States (Agadzi 1989), and French colonial powers bringing the disease into Africa where it lay dormant for centuries (Duh 1991). These theories are not relegated to fringe elements on the continent. When Kenyan environmental activist Wangari Maathai was awarded the 2004 Nobel Peace Prize, public pressure forced her to retract statements accusing evil scientists of using AIDS to control Africans (Gibbs 2004). Similar origin stories are also popular among Western AIDS dissenters who claim that HIV does not cause AIDS. The prevalence of such theories on the African continent is but one example of how readily Africans may be willing to distrust the Western orthodox conception of the disease. It is little wonder, given the abuse of people on the Continent in the name of AIDS that Treichler documents. Western scientific rhetoric does not arrive pristine in Africa, but is saddled with the historical legacy of exploitation there. This legacy can sometimes trump scientific arguments that may seem painfully obvious to other observers. While the conspiracy theories may be false, they do fit a pattern that corresponds to the lived experience of the victims of Western colonialism. Understanding that context allows for a more nuanced assessment of rhetoric originating from within it.

1.6.2 The Impact of an Epidemic

The AIDS epidemic itself raises significant rhetorical challenges that must be accounted for. A complicated disease like AIDS, that sparks enormous political and social challenges, makes crafting arguments that respond to those challenges exceedingly difficult. These difficulties are extensively addressed by Anton A. van Niekerk (van Niekerk 2002) of the University of

Stellenbosch. He isolates five “complexities” that stymie our efforts to comprehend the origins and impacts of AIDS. The foremost is poverty. Whether poverty is a *cause* of a disease or just a social context that furthers the spread and impact of a disease is a complicated issue. It is a distinction that van Niekerk finds “is often lacking in the public discourse on AIDS in Africa” (146). It is indubitable that institutionalized poverty in South Africa, including lack of access to basic health care, income inequality, and reliance on migrant labor, are all contributing factors to the spread of AIDS. But determining where contribution ends and causality begins is a thorny issue. That ambiguity will be shown to be a central motivator of the disagreements between dissenters and the orthodoxy.

Second, van Niekerk critiques the characterization of AIDS as an “African epidemic,” since this move “inevitably fosters a politicization of the discourse about the pandemic which, in turn, complicates its effective management considerably” (151). It is a precarious rhetorical tightrope; how does one acknowledge the African-ness of the disease while resisting the temptation to think of the continent, and its people, *as diseased*? We have already noted the tendency to “pathologize” Africa. Doing so in the context of AIDS will no doubt provoke a strong reaction from Africans, even if the move is made in the interests of improving African health care. Add what van Niekerk sees as a general lack of attention from African leaders to AIDS, except of course “President Mbeki’s almost inexplicable flirtations with the views of discredited ‘dissident’ scientists” (149), and you run the risk that there are not enough voices of Africans to counterbalance outside characterizations of the disease. Questions of who will speak for the African experience of AIDS pervade the South African controversy.

The third element van Niekerk addresses is the impact of illiteracy on public health campaigns that attempt to communicate the importance of HIV to AIDS. That issue continues to

baffle expert scientists, let alone systematically undereducated African lay people. Just as a massive health communication campaign about AIDS was necessary in the West, where scientific literacy is comparatively high, so too is the challenge of AIDS education in Africa daunting. If, for example, arguments on either side of the dispute over the etiology of AIDS rely too heavily on appeals to science alone to convince South Africans, then it is quite possible that such appeals will fail. Orthodox scientists in particular often fall into the trap, assuming the “science should speak for itself,” even if millions in South Africa, or its President, do not agree.

The fourth issue singled out by van Niekerk is the vulnerability of women. Patriarchy both contributes to the spread of the disease and encourages a culture of silence where infections cannot be discussed or dealt with. Prostitution, adultery, and rape as systemic societal practices combine with an unwillingness to talk about sex to compound the problem. That context leads to his final complexity, the intimate nature of the disease itself. In a subtle and important argument, van Niekerk notes that, given the abject poverty in which much of the continent exists, “sex remains one of the few avenues of intimacy and an accompanying sense of self-worth and dignity” (156). To be told by the government or foreigners that having sex can kill you is tricky anywhere (remember the struggle to convince gay communities in the United States during the initial outbreak of AIDS), let alone in Africa where outlets for self expression and identity construction may be even more important. When *former colonialists* critique the sexual practice of Africans, negative reactions are not surprising. As a result, you get a common reformation of the acronym AIDS on the streets of South Africa: “Afrikaaner Invention to Deprive us of Sexuality.”

The upshot of the previous analysis is essential to this dissertation. Making rhetoric in South Africa about AIDS is very different than doing so in the West. As a society in transition, the need to create a new sense of self identity may compel attempts to isolate uniquely African

perspectives on the disease. The historical racism of the West surrounding the disease is a strong factor in considering arguments emanating from former oppressors. And the nature of the disease itself creates many questions that need to be answered. How can pathogenesis be separated from institutionalized poverty? How can the West address the impact of AIDS in Africa without pathologizing the people and without alienating the audience? And how can former colonists even talk about an issue as personal, yet politically charged, as sexual practices? South Africa is a unique context in which to make AIDS rhetoric. Looking for those contextual factors in Mbeki's discourse is essential for a satisfactory analysis of the controversy. One final piece of the contextual puzzle remains for us to address. The life and times of President Mbeki himself are an important influence on his eventual AIDS dissent.

1.6.3 Mbeki's Background

If there is anything that life has taught Thabo Mvuyelwa Mbeki, it is self-reliance, the power of knowledge, and the courage to dissent from the dominant view. He is fond of saying that he was "born into struggle." Govan Mbeki, his father, was an ANC activist. Steeped in Communist ideology, Govan was a labor organizer and underground publisher of tracts such as his famous The Peasant's Revolt (Mbeki 1964). The book was smuggled out of prison written on rolls of toilet paper, where Govan was serving a life sentence earned in the Rivonia Trial that sent six members of the ANC leadership, including Nelson Mandela, to prison for life in 1964 (Cauvin 2001).

From an early age, Thabo was forced to move from house to house as his parents were under constant threat of arrest or assassination. Young Thabo began resistance against apartheid in school, and was once expelled for his membership in the Youth League. Sent out of the

country for his own protection, Mbeki eventually made his way to the University of Sussex in England to study economics. While there, Thabo Mbeki was a high profile anti-apartheid activist. He worked for the ANC office in London following graduation. In 1970, he was sent to Moscow for military training, as were most ANC members at the time (Associated 1999). Afterwards, Mbeki worked for ANC offices in Botswana, Swaziland and Nigeria. He was instrumental in the secret negotiations that won the recognition of the ANC by the apartheid government in 1989. He also helped write the new South African Constitution. But Thabo Mbeki was never the public face of the struggle. Always involved, but always behind the scenes, he was the dealmaker backing up the well-known leaders. Thabo Mbeki's rise through the ANC leadership was meteoric if not high profile.

Mbeki first wielded formal power in South Africa in the waning years of the Mandela administration. As Deputy President from 1994 through 2000, Mbeki was handed primary responsibility for running the country as Mandela groomed him for an eventual succession. This played well into Mbeki's talents as a shrewd backroom dealmaker. Mandela would remain the public face of the government, but Mbeki would call the shots. As one observer noted at the time, "Mbeki is the hand inside the velvet Mandela glove" (Dunn 1997). This role suited Mbeki fine, as he had never expected or sought public approval. "Mbeki decided in the early 90's there was no point in competing for the adulation inspired by Mandela and so opted to play the technocrat and intellectual, the master of detail" (Carroll 2004).

Mbeki became a politician who is unafraid to be unpopular. He rose to power by knowing more than his opponents and using that knowledge to his advantage. As the New York Times opined, all of his life Mbeki had been an "intellectual guerilla" (McNeil 1999). From exile, Mbeki organized resistance to apartheid throughout the world, often at grave risk to his

life. But political power was never the end goal. As Mbeki would put it, “We were fighting for freedom, and in your future you might be dead or in prison My particular generation has difficulty internalizing the notion of politics as a profession” (Daley 1996). Saying the right thing, or currying voter approval, were never a part of Mbeki’s political skill set. He came to power by getting things done.

Many dismissed Mbeki’s flirtation with AIDS dissent as intellectual laziness or craven politics. But Mbeki’s personal history did not lend itself well to an easy charge of unsophisticated thinking. His reputation for intellectualism preceded him. “Contemporaries from Britain’s Sussex University, where he studied economics in the early 1960s, recall that while girls were discovering miniskirts, Mbeki favored tweed suits, smoked a pipe and developed a lifelong habit of quoting Shakespeare” (Ashurst 2001). As his predecessor and political mentor Nelson Mandela prepared to retire, the praise for Mbeki’s potential to implement positive change was effusive. “Millard Arnold, the Johannesburg-based US trade envoy for Southern Africa, describes him as the ‘most astute politician’ he has ever met. ‘His vision and sense of what can be achieved and how it can be achieved is better than that of anyone else I’ve come across’” (Africa 1998). Mbeki was elected President in 1999 with a huge parliamentary majority and the adulation of the people of South Africa. He had ambitious plans to tackle the nation’s problems, including the spread of AIDS (Economist 1999).

Yet, while he was respected as a man who could get things done, no one knew exactly what Mbeki believed in. His ideological proclivities have always been somewhat mysterious. In his early years, Mbeki followed his father’s lead and was heavily involved in the Marxist wing of the ANC. However, he would later sever his ties there and seek a political vision more attuned to engagement with Western capitalism. Many of his economic policies were decidedly pro-

business. But there were always markers of a rhetorical allegiance to the revolutionary wing of the ANC.

Commentators on his ideology have consistently noted its vagueness and unpredictability. Much of this ambiguity may have been strategic (Hammill 1999). The ANC contained die-hard revolutionaries and more pragmatic members. Negotiating that difference was a difficult task, and in the end gave Mbeki an enigmatic ideology. Mbeki also had the luxury throughout his entire political career of working behind the scenes. He was therefore under no obligation to publicly articulate any political vision to which he might be held accountable. Mandela was the voice of the people; Mbeki was responsible only to his own vision. And Mbeki kept whatever that vision was indefinite.

The one ideological position that Mbeki has become known for is an essential point in understanding his theories on AIDS. He strongly promoted South Africa as the leader in a rebirth of the African Continent and the key player in shedding the yoke of colonialism. The idea was not new to the country. South African exceptionalism had been prominent since the country's independence from Britain. "The notion that South Africa should play an assertive role in African affairs has featured consistently in the rhetoric of successive South African leaders, irrespective of their physical or ideological hue" (Vale 2002, 122). Continued post-World War II attempts to transform South Africa's economic influence into regional dominance were stymied by the political and practical disadvantages of apartheid. However, after the fall of minority rule, the new government began to assert its will across the subcontinent more aggressively. As the continent's newest democracy, South Africa was seen by many as the best hope for a resurgent African identity. At this time, Mbeki was beginning to develop the defining vision of his leadership, an African Renaissance that would broadly define his administration and

influence his views on AIDS. Mbeki undertook the project with true zeal, creating some of his most memorable speeches to date on the subject. “If the circumstances made the noting of an African Renaissance propitious, both within South Africa and in a wider theatre, it was the appeal of Mbeki’s lyrical imagery that turned the obvious—the commonsensical almost—into a tryst with destiny” (Vale 2002, 124).

The beginnings can be seen in his justly famous “I am an African” speech (Mbeki 1996) marking the adoption of the new South African Constitution. Mbeki notes: “Our sense of elevation at this moment also derives from the fact that this magnificent product is the unique creation of African hands and African minds. B[u]t it also constitutes a tribute to our loss of vanity that we could, despite the temptation to treat ourselves as an exceptional fragment of humanity, draw on the accumulated experience and wisdom of all humankind, to define for ourselves what we want to be.” This first iteration of the new African identity is decidedly collaborative. The monumental achievement of Africans, finally free from the yoke of apartheid and on the verge of a bold ascendancy as a continent, should be seen as a collective achievement of the entire global community. Hubris is the result of abandoning others, even former oppressors, in a moment of triumph.

Mbeki explicated an even bolder and more fully realized version of the African Renaissance several months before his election to the Presidency (Mbeki 1998). This time, the vision is far more oppositional than his first invocation. He notes powerfully the poverty and conflict that have ravaged his continent for centuries. Even though he was Western educated, here Mbeki forthrightly asserts his identity as an African and personally identifies with common suffering of people on his continent.

Thus can we say that the children of Africa, from north to south, from the east and the west and at the very centre of our continent, continue to be consumed by death dealt out by those who have proclaimed a sentence of death on dialogue and reason and on the children of Africa whose limbs are too weak to run away from the rage of adults. Both of these, the harbingers of death and the victims of their wrath are as African as you and I. For that reason, for the reason that we are the disembowelled African mothers and the decapitated African children of Rwanda, we have to say enough and no more.

The problem is not merely one of political repression and genocide. It also strikes at the core of what it means to be African. Mbeki's solution is to rediscover the creative, intellectual, and economic assets of his people. Africans must recognize their own contributions to the world as a means to reestablish their identities, separate from that of the West. "In our world in which the generation of new knowledge and its application to change the human condition is the engine which moves human society further away from barbarism, do we not have need to recall Africa's hundreds of thousands of intellectuals back from their places of emigration in Western Europe and North America, to rejoin those who remain still within our shores!"

Not just a call against "brain drain," Mbeki's claim is that the task is one of overcoming the legacy of colonialism that lies at the very core of the collective African psyche. "In the end, they wanted us to despise ourselves, convinced that, if we were not sub-human, we were, at least, not equal to the colonial master and mistress and were incapable of original thought and the African creativity which has endowed the world with an extraordinary treasure of masterpieces in architecture and the fine arts The beginning of our rebirth as a Continent must be our own rediscovery of our soul." It is easy

to see how this logic might be extended to addressing the challenges of AIDS. Mbeki would search for how the experience of the disease is different in South Africa than in the West. It is also understandable how Western virologists and epidemiologists would reject such a conclusion, contending that disease knows no geography or political history. Whether the general and understandable goals of disentangling Africa from her former colonial masters should extend all the way to the biology of a disease is the matter up for debate.

The case, though, is not that simple. If Mbeki's views on AIDS were simply an application of his vision of an African Renaissance, they would not be so perplexing. Were he a committed nationalist or racial demagogue, his policies would have at least been predictable. But Mbeki was never known as such a figure. And, as has often been noted, AIDS dissent is not an African invention. Its roots are completely Western, and its originators have nothing to do with cultural patterns of knowing that Mbeki will later cite as his reason for adopting that viewpoint. What may have been most frustrating about Mbeki's dissent was that it not only argued for African self-determination, but was thoroughly imbued with Western scientific beliefs as well.

What emerges is a fascinating juxtaposition. Mbeki is a leader who struggles to reclaim his identity as an African and redefine his country, and yet will adopt a Western scientific outlook in order to accomplish that goal. What immediately leaps to mind is the most famous passage by W.E.B. Du Bois (Du Bois 1989) and his articulation of double consciousness:

The Negro is a sort of seventh son, born with a veil, and gifted with second-sight in this American world,--a world which yields him no true self-consciousness, but only lets him see himself through the revelation of the other world. It is a peculiar sensation, this

double-consciousness, this sense of always looking at one's self through the eyes of others, of measuring one's soul by the tape of the world that looks on in amused contempt and pity. One ever feels his twoness,--an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder (5).

This account of newly liberated African-American slave resonates with the newly liberated leader of South Africa. He too is faced with the dilemma of self discovery. South Africa was always the continent's most Western nation, and therefore perhaps the most in need of separation. But the realities of AIDS seem to require acceptance of Western science and medicine, practices that have historically been used to oppress. Mbeki had learned to keep his own council, and yet was forced to expose his thinking in the political arena as President. He stood between two worlds. Once he produced his arguments from this standpoint, the negative reaction from the rest of the world was swift and severe. Now that Mbeki's challenge is sufficiently understood, we may now turn to a close examination of this rhetoric. In the next chapter, we will consider how he went from advocate of AIDS drugs to opponent, and how the world responded.

2.0 CHAPTER TWO

AIDS in South Africa, like so much else in that country, is intelligible only when viewed through the lens of apartheid. The country's migrant labor system, where poorly constructed camps would hold thousands of men, not only lacked a public health infrastructure but separated male workers from their families, encouraging prostitution. AIDS spread quickly throughout South Africa at the exact same time that the people were winning their political freedom. But the new African National Congress government was also slow in its response, choosing to focus on the problems of a political transition rather than on the incubating disease (Sparks 2003). While Mandela's government "identified AIDS Awareness as a special Presidential Lead project and doubled the budget for combating this epidemic" (Phillips 2003, 76), implementation of those programs quickly broke down over bureaucratic turf battles (Schneider 2001). And like most other leaders on the continent, Mandela rarely if ever used the bully pulpit to draw attention to the disease. When Mandela recently spoke at the funeral of his son, it was among the first times that any public figure in South Africa had acknowledged that AIDS had impacted their families personally (Agence 2005).⁴

But any potential criticism of Nelson Mandela's response to AIDS would pale in comparison to the deafening uproar over the policies of his successor. After his election in 1999,

⁴ AIDS dissenter David Rasnick claimed in a letter to the editor to South Africa's Sunday Times (Rasnick 2005) that anti-retroviral drugs had probably killed Makgatho Mandela.

President Thabo Mbeki not only entertained the unorthodox views of AIDS dissidents, but actually based policy on the assumption that the causal link between HIV and AIDS was unproven. The view was one of the most perplexing and infuriating political positions taken during the entire course of the epidemic, in any country. Mbeki got to that position by a strange route.

Over the course of eight years, Mbeki would move from being an advocate of experimental and risky drugs designed to treat HIV to tacitly denying that HIV even exists. He would spend tremendous amounts of political capital to win the right to import cheap anti-retroviral drugs, only to let his newly won powers lay idle. The international acclaim that he inherited as the successor of Nelson Mandela would turn into international derision as the poster child for AIDS dissent. This chapter will offer an explanation as to why these shifts occurred. The changes in his position defy easy explanation. But it will be argued that his arguments are not the product of scientific illiteracy. Rather, Mbeki's rhetoric is a result of an implicit proto-theory (Lyne 1998) of science as it relates to contested and uncertain applications of policy. By explicating this proto-theory of science, a more nuanced reading of Mbeki's rhetoric of AIDS is possible, one that clarifies the contested issues in the debate. Definitively answering the question of whether or not Mbeki's views stand up to scientific scrutiny is a question beyond this author's expertise. It is also secondary to the question of how Mbeki's arguments function in a rhetorical space where defenses of scientific policy are made in the face of uncertainty. This chapter will expose the grounds for argument and the implicit views on standards of scientific proof deployed by both sides.

Pivotal moments will be analyzed flowing from the stinging reaction to Mbeki's early attempts to deal with the problem of HIV/AIDS, and his clandestine encounters with AIDS

dissenters. It will be shown that Mbeki's rhetoric is intelligible through a theory of science born from his experience with AIDS during his political tenure. It will also be argued that Mbeki adopts standards of scientific proof in policy contexts that are far more strict than many of his critics. Discovering why Mbeki's arguments have been perceived as such a miserable failure will require exposing the proto-theoretical assumptions under girding his critics as well.

First, though, we will examine John Lyne's version of proto-theories and consider how they might influence scientific rhetoric. Lyne offers an argument-based epistemic account that applies to the sorts of knowledge claims that are common in this particular debate. He argues that the rhetoric of all actors in a public debate over science invokes implicit epistemologies and philosophies of science through the process of invention and argument. The production of publicly oriented political rhetoric is not governed by a theory of knowledge that would meet the standards of analytic philosophy. Rather, it reflects a contextually shaped proto-theory, where contested expert testimony and methodologies are fitted to the cross-cultural contextual requirements of the moment. The epistemic standards are therefore not simply matters of "opinion." Rather, they are emergent but unarticulated working theories of what is knowable, that is to say, proto-theories. It is the interaction of those theories that is at stake when decisions need to be made in times of urgency based on disputed scientific arguments and evidence. What we count as true and false at these points of uncertainty is not just the particular dynamics of any rhetorical moment, but an interplay of rhetoric, context, and proto-theories. Contestation is pivotal, and scientific controversies especially are often ones where knowledge claims themselves are the contested element. The AIDS debate in South Africa in particular is one where the status of knowledge claims is heavily contested. Lyne's insights are particularly useful for explaining how the rhetoric of this case came to be the way it was.

The task of this section is to expose the proto-theoretical assumptions about science at work in President Mbeki's rhetoric about AIDS. Rather than guess at the man's psyche, the developments of his public arguments about AIDS will be our focus. Before his Presidency, Mbeki's assessment of AIDS science and the need for drug treatments was very different from his dissent of 2000. By looking at Mbeki's words and actions for clues to his implicit assumptions about the evaluation of scientific argument, it will be possible to give a plausible account of why he changed his mind.

2.1 THE QUICK FIX OF VIRODENE

It is one of the many ironies of this case that at the beginning of Thabo Mbeki's role in shaping AIDS policy in South Africa, he was criticized for favoring action *too hastily*. In January of 1997, scientists at the University of Pretoria claimed a major breakthrough in AIDS medicine, the development of a drug called Virodene they claimed would permanently eradicate HIV in a patient after only six weeks (Duetche 1997). The cost was a mere eighteen dollars over the length of the regimen. For a brief moment, the eyes of the world were on South Africa as the potential source of a treatment for HIV and AIDS.

However, within one week, the Medicines Control Council (MCC) of South Africa (the equivalent of the Food and Drug Administration in the United States) had ordered a halt to further testing of the drug (Cohen 1997). The Pretoria researchers had failed to get authorization for their twelve person pilot study and none of their protocols or conclusions had been submitted to peer review before being announced in the popular press. Once the MCC found out how Virodene supposedly worked, they shut down all testing. The researchers had made a name in

cryopreservation some years ago by being the first to successfully restart a frozen rat's heart. Diethylformamide was an industrial solvent used in their cryonics research, and it now served as one of the active ingredients in Virodene. The MCC asserted that compelling evidence linked diethylformamide to liver and DNA damage in humans, requiring that the researchers show a likelihood of medical benefits before any human trials could be authorized.

The dispute became front-page political news in South Africa. Health Minister Nkosazana Zuma publicly backed financing further research with Virodene after the MCC had blocked it (Zavis 1997). Zuma had the power to financially support the research, but only the MCC could permit the research to be performed. This disagreement sparked a lengthy and public disagreement between the ANC government and the independent MCC. Charges flew between the regulators and politicians, with the MCC accusing the government of supporting junk science and the ANC accusing the oversight board of dragging its heels on a potential miracle drug.

Meanwhile, some South African AIDS patients began to demand early access to the drug. “‘We’re dying anyway, so why not give us the bloody Virodene?’ asked one out-patient at the Sparrow Nest Home for People with Aids. ‘We pray and pray and pray for a cure, then something comes along, and people jump all over the researchers’” (Mail 1997). In at least one way, the Virodene controversy mirrored the fight in the United States over AZT in the late 1980s and early 1990s (see chapter 3). A conservative regulatory establishment was pitted against lay activists and politicians over the appropriate protocols for AIDS drug trials. A major difference between the cases was that the scientific evidence at the time for AZT was much more conclusive than for Virodene, even if the clinical utility of AZT was still largely unknown by traditional standards for new drugs. The fact that the ANC would back the even more speculative Virodene underscores the fact that, during the end of the Mandela administration, the

government was backing aggressive research into unproven and potentially toxic pharmacological treatments for HIV and AIDS. And Thabo Mbeki, in an apparent contradiction of what would be his forthcoming position on anti-retroviral drugs, was a major backer of research into Virodene.

Mbeki's support of the drug landed him in political hot water. The Democratic Party, the ANC's political opposition, made blistering claims regarding corrupt ties between Cryopreservation Technologies, the company that held rights to the drug, and the ANC. They claimed the existence of a document promising the ANC a 6% financial stake in Virodene by the company. This might explain the ANC's staunch defense of an otherwise discredited drug (Hartley 1998). Deputy Vice President Thabo Mbeki, by this time the clear heir apparent to Nelson Mandela, was accused of having personally arranged for meetings between Cryopreservation Technologies and influential members of the government (Selsky 1998). The Democratic Party also accused Mbeki of having arranged for an ANC official to run the company while on the public payroll (Global 1998). At this point, South Africa's Office of the Public Protector, a national ombudsman, was called in to analyze the situation. Eventually, the office absolved both Zuma and Mbeki from accusations of nefarious business transactions with the company (Smith 1999). Nonetheless, the Virodene affair was a full blown scandal (Templeman 1998), with the result that Mbeki was involved in a high profile political row that was at least partially the result of his eager embrace of an untested drug to treat AIDS.

While the political machinations churned in South Africa, foreign researchers were quickly debunking Virodene as an AIDS cure. German scientists determined that Virodene was completely worthless (Lundin 1998). Some likened the therapeutic value of Virodene to poison. As one researcher put it "They say Virodene kills the virus . . . So does bleach but I wouldn't

inject it into patients” (Baird 1998). In fact, research determined that Virodene may actually activate HIV as opposed to suppressing it (Gledhill 1998). Virodene as a potential cure would eventually fade away, because of both the safety and efficacy concerns and the lingering political scandals. The potentially improper relationship between Mbeki and the makers of Virodene intensified the need for a public defense of his AIDS position on the merits of the science.

2.2 MBEKI AS DEFENDER OF AIDS DRUGS

In a March 1998 editorial appearing in several South African newspapers, Mbeki expressed support for Virodene research and denied personal or ANC financial entanglement with Cryopreservation Technologies (Mbeki 1998). The article was a call for aggressively pursuing drug therapies. Of course, two years later he would reverse himself and oppose such treatments in combination with his embrace of AIDS dissent. But in this editorial, Mbeki sees drug treatments like Virodene as part of an overall proactive government policy in combating the disease.

Both I and the Minister of Health, as well as the rest of our colleagues in our country’s system of governance, will try as best as we can to discharge our responsibilities in the supremely important fight against HIV/AIDS, including support for all relevant bona fide medical research.

For Mbeki in 1998, there was a strong ethical commitment to providing treatment that a timid scientific establishment was unwilling to acknowledge. “To confirm its determined stance against Virodene, and contrary to previous practice, the MCC has, with powers to decide who

shall live or die, also denied dying AIDS sufferers the possibility of ‘mercy treatment’ *to which they are morally entitled* [emphasis added].” Mbeki blames politics for the unwillingness of the MCC to give the green light to Virodene research. “As we frittered away time by promoting our various agendas rather than do the important thing of investigating the efficacy of Virodene, the world scientific community has been subjecting the Virodene Protocol to a detailed assessment.” He then cites several scientists who defend the protocols and urge the research resume. Meanwhile, more and more people who might be potentially helped by the drug are lost.

Time constraints reinforced Mbeki’s normative arguments for immediate action. “If nothing else, all those infected by HIV/AIDS need to know as a matter of urgency.” Just as in the United States, the impending explosion of the health crisis and the astronomical death rates for those infected with AIDS commanded a regulatory stance that favors action. Those infected are owed action, even if the level of doubt about experimental medicines is higher than would be tolerated for less timely issues. This aspect of Mbeki’s argument is fundamentally opposed to his subsequent AIDS dissent.

Mbeki’s critics can no doubt point to the financial ties between the then Deputy Vice President and the makers of Virodene to account for his stance in 1998. But once the government investigator cleared Mbeki of that charge, the issue at best became fodder for his weak political opponents and no real challenge to his leadership. Mbeki’s support for Virodene might have been a smokescreen for government corruption, but there were surely less dramatic ways to address that issue. His editorial is instead a sweeping defense of the moral necessity of pursuing risky AIDS drugs in general. Besides, support of a drug such as Virodene could be seen as the norm for a South African politician. University of Cape Town historian of medicine Howard

Phillips (Phillips 2003) argues that backing Virodene falls in line with South Africa's history of dealing with epidemics.

Equally common during the past epidemics in South Africa and elsewhere is that the premium on finding an antidote rises very dramatically, for obvious life and death reasons. Thus, driven by humanitarian and economic motives and heavy pressure from government, laboratories in South Africa hurriedly produced vaccines or drugs against all manner of diseases in the midst of epidemic outbreaks during the 20th century. The development of the anti-AIDS "wonder drug" Virodene, by two Pretoria researchers in 1997 and the enthusiastic backing this received from the government falls squarely into a well-established mould (73-74).

Mbeki's defense of Virodene is a proactive, if naïve, defense of experimental drug treatments for AIDS that is not surprising to those who have studied South Africa's history and politics. Indeed, experimental drugs are often embraced in the midst of an epidemic (see chapter 3).

But Mbeki's argument in this editorial also shows traces of his coming dissent. He sees the medical establishment not just as overly cautious; a conspiracy is afoot that is much more sinister. Foreshadowing his own statements about the defenders of ARV drugs that would be roundly criticized later, Mbeki alludes to dark forces at work. He claims that those who were reporting illnesses from using Virodene were making fraudulent charges. He asserts that "night raids directed at some of the researchers were carried out by investigators in search of information about alleged criminal behaviour." Even physical violence was part of the conspiracy to quash the drug. "Shots have been fired at one of the researchers by unknown gunmen, leading to the need to provide armed protection How alien all these goings-on seem to be to the pursuits of medical research! In our strange world, those who seek the good for

all humanity have become the villains of our time!” Mbeki sees opposition to research into Virodene as antithetical to the spirit of scientific inquiry in the interests of the public good. The researchers are champions of the ill, and yet are being treated like criminals. Mbeki’s personal feelings of frustration and his growing concern that the medical establishment may be responsible for prejudice and for willfully stonewalling in the face of the truth is clear in the following excerpt:

The great sand storms generated by all these vexatious proceedings have served to obscure the fact that what confronts us all is the pressing crisis of an escalating pandemic of HIV/AIDS. Two thirds of those affected world-wide are in Sub-Saharan Africa, including a 2.8 million strong South African contingent. Often I have wondered whether those who have generated sand storms with the greatest enthusiasm, did not, in fact, seek to achieve precisely this result! Time will tell what lies behind this behaviour, which has produced in me feelings of exasperation, anger and sadness.

The sand storm that Mbeki spied would, for him, build into a concentrated effort on the part of the Western scientific establishment to replicate the evils of apartheid by suppressing debate. And the response to Virodene was not Mbeki’s only evidence for this conspiracy.

2.3 THE TRIPS CONTROVERSY

While the Virodene affair was percolating in South Africa, another clash concerning AIDS drug policy was boiling over into an international dispute. This issue is yet another example of how Mbeki was pursuing government policy based on the assumption that HIV existed and that experimental drugs were the way to fight the disease. A 1997 amendment to the country’s

Medicines and Related Substances Control Act thrust South Africa into the thorny issue of parallel importation. Developing countries often will produce generic or knockoff versions of expensive drugs, especially prohibitively expensive drugs like anti-retrovirals, and then sell those copies in violation of intellectual property restrictions and copyright laws. In the midst of a health crisis, South Africa was claiming the right to break these patent protections on drugs such as AZT and Nevirapine (a transmission inhibitor) and import these cheaper, generic alternatives made in Brazil or Thailand.

Right after the law was passed, over forty pharmaceutical companies sued in South African courts claiming that parallel importation violated agreements made by the country through its membership in the World Trade Organization (WTO) (Chenault 1999). These provisions fall under parts of the WTO agreement known as TRIPS or Trade Related Aspects of Intellectual Property Rights. The so-called TRIPS controversy would dominate US-South African economic and diplomatic relations for several years, and according to observers, would sour President Mbeki on the trustworthiness of the pharmaceutical creators of ARV drugs and the Western governments that protected them (Sparks 2003).

The companies claimed that the South African policy violated both the WTO agreement and the South African Constitution by giving too much power to cabinet ministers to make decisions. But many observers saw profit as the predominant motive for the lawsuit. The Lancet opined in response to the lawsuit that “drug companies cannot put shareholder interests before their moral responsibility to take part in improving the world’s public health” (Lancet 2001). Scores of international organizations publicly denounced the lawsuit, including OXFAM and Doctors Without Borders. Particularly troubling to drug companies was the possibility that other countries would invoke the right to parallel importation on the grounds of a national health

emergency. Indeed, the strategy quickly began to spread to other countries. At the urging of the drug companies, the United States brought charges against Brazil before the WTO for allowing the manufacture of generic drugs (Capdevila 2001). The Western world seemed to be mounting a full-fledged war on the attempt by poorer countries to gain access to cheap medicine. The debate was cast as the developing world versus the giant drug companies and their government allies.

But it was not only Western corporations that opposed Mbeki's moves to import generic AIDS drugs. Pressure to oppose the South African law came from American politicians of both major political parties. "Rodney Frelinghuysen, a Republican congressman from New Jersey whose district includes several drug companies . . . attached a provision to last year's [1999] budget that blocked U.S. Aid to South Africa until the State Department explained how it was helping his corporate friends" (Mabry 1999). Vice President Al Gore, the eventual Democratic nominee for President, was himself a large recipient of pharmaceutical campaign contributions. He lobbied in favor of exerting intense diplomatic pressure on Mbeki, including threats to put South Africa on a watch list for possible punitive economic action. Gore's vocal support of the drug company lawsuits lead the editors of Nature to wonder if "the vice-president's critics are right when they claim he has been more than a little influenced by the pharmaceutical kings" (Editors 1999).

In an attempt to combat the political pressure from Congress and the Executive Branch to import the more expensive, American made ARV drugs, President Mbeki visited the United States in 1999. But his visit produced no policy changes. The United States continued to support the lawsuits brought by the pharmaceutical industry opposing parallel importation. Even the US-South African Bi-National Commission, set up to broker economic ties between the two

countries, was co-chaired by Vice President Gore, who represented the American government on the body. Mbeki was stymied at every turn.

The political impact of trade laws that prevented AIDS medicine from getting to Africans was damaging to the international reputations of the American administration and the pharmaceutical companies. Many felt that the United States was wrong on the law as well. David Barnard (Barnard 2002) argued that nothing within WTO intellectual property provisions applied to ARV drugs, and in any case trade law allows for national health emergency exceptions to those rules. In 2001 the WTO itself clarified its regulations to allow for parallel importation of ARV drugs. Pharmaceutical companies retracted their lawsuits against the South African TRIPS law, apparently to save themselves from a fate potentially worse than parallel importation. As Barnard observed, the South African Supreme Court admitted affidavits that “threatened to lay open to public scrutiny details of drug company research and development costs for AIDS drugs relative to government investments of public funds” (166). Evidence of the profit margins involved in the manufacture of patented AIDS drugs could easily have compounded the already deep public relations hits taken by the companies.

Once the WTO made an exception for ARV drugs and the lawsuits were dropped, Mbeki had the legal authority to import cheaper ARV drugs. Even if the efficacy of knock-off versions of the originals drugs were an issue, Mbeki by this time could have gotten the original drugs whose prices were so high that he turned to parallel importation in the first place. As part of his political agenda of increasing US AIDS assistance to Africa, the new American President George W. Bush offered price cuts and even pressured US drug companies to offer free drugs for a time to South Africa. And yet, Mbeki never used his new found and hard fought power to either get cheap copies of AZT or the original for free. After years of political struggle, Mbeki was no

longer seeking out anti-retroviral drugs but was consciously opposing their use regardless of the cost or country of origin. What had happened?

2.4 AIDS DISSENT COMES TO SOUTH AFRICA

“What had happened in the interim” according to South African journalist Allister Sparks, “is that the President had found the websites run by the AIDS dissidents” (Sparks 2003). Sparks’s book Beyond the Miracle: Inside the New South Africa notes that “Mbeki himself confirmed that the first person to draw his attention to these dissident websites was a lawyer and part-time jazz musician named Anthony Brink, then practicing in the provincial city of Pietermaritzburg” (286). Brink sent Mbeki copies of an exchange between himself and Dr. Desmond Martin, President of the South African HIV/AIDS Clinicians Society, on the etiology of AIDS and the toxicity of AZT. The articles had been carried in the alternative newspaper The Citizen in March of 1999 (Brink 2000).

The exchange is important because, as Mbeki told Sparks in an interview, “that was the first time I [Mbeki] became aware of the alternative viewpoint” (286). Also, the debate in The Citizen begins to develop a theory of AIDS dissent specific to South African policy challenges. Brink’s initial salvo, “AZT: A Medicine from Hell,” was dynamic and cutting and designed with the lay audience in mind. Brink would admit in a foreword to a later edition of the essay that “its sardonic tone and polemical style were contrived to stimulate a public debate of hitherto unexamined issues in the current controversy in South Africa concerning the provision of AZT to rape victims and HIV-positive pregnant women.” Brink possessed no scientific credentials

himself, but the piece is packed with the kinds of scientific jargon that had been so influential in establishing the credibility of lay AIDS activists in the United States (see chapter 3). Consider Brinks's description of how AZT works:

It works like this. Thymidine is one of the four nucleotides (building blocks) of DNA, the basic molecule of life. AZT is an artificial fake, a dead ringer for thymidine. As a cell synthesizes new DNA while preparing to divide in order to spawn another, AZT either steals in to take the place of the real thing, or else disrupts the delicate process by interfering with the cell's regulation of the relative concentrations of nucleotide pools present during DNA synthesis Their effect is wholesale cell death of every type, particularly the rapidly dividing cells of the immune system and those lining our guts . . .

It was akin to napalm-bombing a school to kill some roof-rats.

The scientific descriptions seem sophisticated enough, but are combined with metaphor and personification to increase their persuasive impact on the reader in a way that many scientists are neither trained nor inclined to do. Compare the previous description of AZT with Dr. Martin's, published in his response one day after "A Drug From Hell" appeared:

The toxicity of AZT is a very real issue however, the toxicity (particularly bone marrow toxicity) is usually noted in patients with advanced HIV disease whose bone marrow function may already be impaired by HIV disease. Toxicity does not appear to be a problem during short-term use (post exposure prophylaxis or mother-to-child transmission prevention) Thus AZT in combination with other drugs has proved to be invaluable for the treatment of those already infected with HIV and has also proved to be a potent preventative agent in the mother-to-child setting and for occupational

exposures. For these very reasons the drug AZT deserves the accolade: AZT: a medicine from heaven.

Absent are the flourishes and punch lines of Brink's piece. The predominant argument is that science has spoken, and critiques of AZT simply miss the point. And without a doubt, many of Brink's charges *had* been dealt with to the satisfaction of almost all observers during the initial etiology debates between the early AIDS dissenters and others in the early 1990s (see chapter 3). There is little or nothing new in "A Medicine from Hell." But Brink's South African audience is one in which AIDS is just becoming a major issue and in which that debate has not yet taken place. Martin assumes that the word of science is enough to rebut Brink's charges. But unless one is ready to accept the word of the scientific community as an acceptable answer to individual points, then Martin does little to directly respond to Brink's contentions.

The science aside, Brink entered the fray with stylistic flair. He writes with a force and command of literary device that no doubt resonates with the lay audience he seeks. Martin's brief attempt to play hell and heaven off of one another at the end of his piece is devastatingly brushed aside in Brink's rejoinder of a day later. "AZT - pure poison? Nonsense, retorts Dr. Martin, with the avuncular bedside reassurance of a Doctor who knows best. AZT, he proclaims, is God's own medicine." Here, Martin's superior scientific credentials are turned into a liability. Brink casts the scientific community as out of touch and arrogant, unable to question the received wisdom of the efficacy of ARV drugs. It is true that much of Brink's argument lacks evidence. Rather, it invokes rhetorical questions and attacks on the character of orthodox scientists and pharmaceutical corporations.

This exchange was Thabo Mbeki's first encounter with an alternative viewpoint on the health issue that had caused him so much domestic and international grief. And in Brink's

arguments we also see many themes that would later dominate Mbeki's rhetoric. Brink charges the American FDA of bowing to political pressure in its premature (in his view) endorsement of AZT, putting expediency before truth. Brink argues that cheaper alternatives, such as Vitamin A, were safer and more effective than AZT. He consistently questions the profit motives of pharmaceutical companies, and goes so far as to compare them to street drug dealers looking for the "come-back." Do not trust the offers of cheap ARV drugs from the pharmaceutical companies, says Brink, because "as it [Glaxo Wellcome]⁵ has achieved so successfully abroad, what better way to fix its local market than by buying off our medical establishment and 'AIDS activist' crowd with lolly aplenty to fund their risible projects? And by baiting our government with current discounts for its rancid wares, in order to hook longer-term contractual commitments" (Brink 2000). Mbeki believed he had seen such things before. He felt that the decision to hold up research on Virodene was hasty, political, and contrary to the public interest. He saw the West's desire for profits in the TRIPS affair. That such arguments applied by Brink to ARV drugs would pique Mbeki's interest is not a surprise.

The fact that Brink and his partner Anita Allen would be these messengers of dissent to Mbeki, Sparks observes, is unexpected. "Both are improbable Galileos to be challenging the general body of world science in this way, although they clearly see themselves in this light. Galileo was a scientist challenging laypersons trapped in religious dogma; these are laypersons challenging the very body of modern science that Galileo fathered" (Sparks 2003, 286). While Sparks may have over flattered Brink and Allen in this passage, it does suggest how easily Galileo can be invoked to rhetorical effect. President Mbeki himself would soon invoke the legacy of Galileo in his infamous defense of AIDS dissent. While Brinks and Allen may be

⁵ Glaxo Wellcome merged with the drug company SmithKline Beecham in 2000 and is now known as GlaxoSmithKline.

unlikely messengers, Mbeki personally does not require that they have scientific credentials to consider their arguments. He does not seem to be applying traditional standards of scientific expertise before considering the dissenters' arguments.

Brink made several bold claims, charging an international medical and corporate conspiracy to peddle poison to unsuspecting South Africans. The rejoinder from Martin relies on accepting the orthodox scientific view without specifically addressing any of Brink's claims beyond stating "we have already dealt with that." But, as we have seen, by this point Mbeki had reasons for mistrusting the scientific orthodoxy and thus for not accepting the assurance that Brink's points were no longer at issue. As we saw in chapter one, his whole life has been one of dissent and personal investigation. He rose to the ranks of power by trusting his own judgment and seeking the truth in places outside of public scrutiny. He had seen Virodene, his own choice for treating AIDS, quashed by the MCC and his champions from Pretoria marginalized and harassed. His attempt to procure ARV drugs was met by infuriating opposition from companies and governments who were supposedly committed to South Africa and to the fight against AIDS. And at this point, Mbeki encountered a group of dissenters who argue that these same prejudices, desire for profits, and (in Mbeki's opinion) pseudo-science are at play all the way down to the basic science of AIDS and HIV. There is pattern here; when it comes to AIDS, the orthodoxy quashes dissent for its own gain.

These events had a powerful effect on Mbeki. They came to shape the way that he viewed arguments about AIDS science. In the next section, it will be argued that these experiences helped create a proto-theoretical account of the science that influenced his rhetoric. Mbeki was pursuing both homegrown and foreign made AIDS drugs up through 1998. Brink's piece appeared in March 1999. By October of that year, immediately following his election to

the Presidency, Mbeki was making public statements questioning the etiology of AIDS. With the insights about how he got there in mind, it is now possible to turn to an examination of his rhetoric and the responses to it.

2.5 MBEKI THE DISSIDENT

Even given the historical development of Mbeki's relationship with AIDS, the President's first public articulation of AIDS dissent seemed to the rest of the world to come out of nowhere. In an address to his National Council of Provinces on October 28, 1999, a speech that entirely avoided the subject of AIDS entirely until the very end, Mbeki made the following statement regarding calls for making AZT more widely available:

Two matters in this regard have been brought to our attention. One of these is that there are legal cases pending in this country, the United Kingdom and the United States against AZT on the basis that this drug is harmful to health. There also exists a large volume of scientific literature alleging that, among other things, the toxicity of this drug is such that it is in fact a danger to health. These are matters of great concern to the Government as it would be irresponsible for us not to heed the dire warnings which medical researchers have been making. I have therefore asked the Minister of Health, as a matter of urgency, to go into all these matters so that, to the extent that it is possible, we ourselves, including our country's medical authorities, are certain of where the truth lies. To understand this matter better, I would urge the Honourable Members of the National Council to access the huge volume of literature on this matter available on the Internet, so that all of us can approach this issue from the same base of information (Mbeki 1999).

The statement was perplexing for a number of reasons. For starters, there were not any pending lawsuits against AZT (or rather, the makers of AZT) in the United States or United Kingdom. Plus, the citation of Internet evidence struck many as careless. As the Economist wryly put it, “In his few spare moments, President Thabo Mbeki of South Africa likes to surf the web. Nothing wrong with that except that the Internet, on its own, may not be the soundest basis for important policy decisions” (Economist 1999). Negative reaction flowed in from the MCC and South Africa’s Human Rights Commission. But Mbeki was undeterred. He was preparing not simply to urge his colleagues to study the issue, but to create a context where such an appraisal could occur on a grand scale.

In March 2000, Mbeki deepened his commitment to further debate on the question of providing anti-retroviral drugs to his people by announcing his intention to form an international panel of scientists to reappraise the evidence surrounding AIDS. The President attempted to remain non-committal on AIDS dissent, but it was clear that the panel was designed for more than a cursory examination of the issue. Mbeki had not said publicly whether he believed HIV causes AIDS, and presidential spokesperson Parks Mankahlana insisted that Mbeki is “not an advocate of the dissidents.” Still, Mankahlana told the [Village] Voice that Mbeki has ordered his health minister to assemble an international panel to look into “everything about AIDS,” from the merits of various treatments such as AZT to “whether there’s this thing called AIDS, what it is, *whether HIV leads to AIDS, whether there is something called HIV* [emphasis added], for an example. All these questions” (Schoofs 2000).

This panel was to include the open participation of AIDS dissidents. Given the conclusions that such a panel was likely to reach, Nature wondered whether or not the dissidents were actually dictating South African policy at this point (Cherry 2000). The shock of Mbeki’s

announcement that the panel would question AIDS science all the way down to its most basic assumption was compounded by the fact that Durban was poised to host the International AIDS Conference, where the disease's impact on Africa was set to dominate the agenda, the following summer. A month after the announcement of his intention to convene his AIDS panel, Mbeki composed a letter to world leaders defending the creation of the panel and his government's inaction surrounding AIDS drug treatments. It made headlines throughout the world and was the boldest statement of AIDS dissent by a head of state ever.

2.6 THE LETTER

On April 3, 2000, Mbeki dispatched, hand addressed and in diplomatic pouch, a copy of a letter to US President Bill Clinton and UN Secretary General Kofi Annan outlining his government's policy on AIDS. The letter was received with much confusion. South African officials were consulted to verify its authenticity. Once authorship was established, Clinton ordered the letter be kept secret for fear that long resolved debates over AIDS would be rekindled. However, news of the letter was leaked to the press and became front page news in the Washington Post two weeks after it was delivered (Gellman 2000).

The letter is an essential artifact in the rhetorical history of AIDS in South Africa for several reasons. It remains to this day the most focused and lengthy defense of Mbeki's views on AIDS. It also, to an extent far greater than any other performance, situates AIDS dissent within a broad, albeit implicit, philosophy of science. The full picture of how the science of AIDS etiology is filtered through Mbeki's views on the evaluation of evidence, his view on the level of certainty that science must possess before policy prescriptions are warranted, and the role

that race and class play in the adjudication of scientific knowledge claims are contained in the April 2000 letter. The fact that Mbeki speaks to an international audience contributes to the sweeping defense of both his AIDS views and his broader scientific assumptions. The letter is the clearest articulation we have of the assumptions Mbeki holds about how scientific arguments are to be evaluated. For these reasons, it is our most likely candidate to assess the proto-theoretical elements of Mbeki's philosophy of science as it relates to AIDS policy. The full text of the letter, as it appeared in the Washington Post is available in the appendix.

The letter's first third contains a list of programs and policies that South Africa has initiated to fight AIDS. But the letter then makes a turn and begins to argue that quick action based on a Western understanding of AIDS is not warranted for South Africa. He argues that too little is known about the disease's idiosyncrasies in his country, and therefore that an international panel needs to be convened, while the distribution of drugs would have to wait. Mbeki's reasoning had several key components.

The first is demographic uniqueness. Mbeki calls for further study of AIDS in Africa to determine whether Western remedies such as anti-retroviral drugs should be adopted. He highlights three arguments regarding the uniqueness of the science as it applies to South Africa: (1) "contrary to the West, HIV-AIDS in Africa is heterosexually transmitted," (2) "contrary to the West, where relatively few people have died from AIDS, itself a matter of serious concern, millions are said to have died in Africa," and (3) "contrary to the West, where AIDS deaths are declining, even greater numbers of Africans are destined to die." Important as it would turn out to be in the eyes of his scientific critics, Mbeki fails to provide a scientific explanation of why differences in death rates or methods of transmission constitutes a fault in the scientific conclusions reached by Western scientists and warrants the need for further study. Mbeki's

Western audience has come to doubt such conclusions as counter-productive. A distinction between Western and African AIDS (Pattern One and Pattern Two AIDS, respectively, as the World Health Organization once referred to them) had been abandoned some time ago in the West (Patton 1990).

The second argument contends that African AIDS is culturally unique. Mbeki deploys arguments favoring further debate from the standpoint of South Africa's history of political and racial oppression prior to the end of apartheid in 1994. He challenges the assumption that any dissenting views should be ignored, and suggests that encouraging full and open debate over any controversial issue is the lesson learned from his country's recent past. He clearly argues that there is a parallel between the racial oppression under apartheid and the suppression of dissenting scientific viewpoints in the AIDS controversy. "Not long ago, in our own country, people were killed, tortured, imprisoned and prohibited from being quoted in private and in public because the established authority believed that their views were dangerous and discredited." Mbeki's invocation of the recent history of South Africa is undeniable as well as doubly persuasive given his position as one who had personally suffered under that tyranny. Those experiences, Mbeki argues, give him a unique standpoint from which to evaluate the arguments of Western scientists as they apply to his people. One remark at the end of his letter is especially telling. He writes, "It may be that these comments are extravagant. If they are, it is because in the very recent past, we had to fix our own eyes on the very face of tyranny." Mbeki seems to simultaneously acknowledge his own overstatement and justify it.

Having established why the history of his country and his personal experiences make him sensitive to curbing open debate, Mbeki makes his crucial argumentative move. He argues that failure to allow debate about the science of AIDS or whether drug treatments do more harm than

good is akin to the apartheid policies that he fought for over thirty years. “We are now being asked to do precisely the same thing that the racist apartheid tyranny we opposed did, because, it is said, there exists a scientific view that is supported by the majority, against which dissent is prohibited.” He accomplishes this move by appealing to the standard conception of science as fallible and open to debate on issues of truth. Why, he asks, is that same ethic not present in the AIDS debate? “People who otherwise would fight very hard to defend the critically important rights of freedom of thought and speech occupy, with regard to the HIV-AIDS issue, the frontline in the campaign of intellectual intimidation and terrorism which argues that the only freedom we have is to agree with what they decree to be established scientific truths.” The clear comparison of this scientific debate to a “campaign of . . . intimidation,” and “terrorism,” a fight with a “frontline” occupied by a group of people who demand total ascension while limiting the rights of their opponents to even speak on the issue, paints a picture of the AIDS debate in overtly militaristic and repressive terms. That sensibility feeds Mbeki’s assertion that there is a similarity between the silencing of political debate under apartheid and the closure of discussion over AIDS by Western scientists. Simultaneously containing and feeding subsequent arguments against him, Mbeki warns in the letter against an “orchestrated campaign of condemnation” by those forces aligned against his quest for free speech and debate.

Mbeki’s third argument uses the idea of the fallibility of science generally. Mbeki couples his arguments about the demographic and cultural uniqueness of the African situation with an appeal to the history of scientific dissent as one that argues in favor of discussion over cloture. He writes that “scientists, in the name of science, are demanding that we should cooperate with them to freeze scientific discourse on HIV-AIDS at the specific point this discourse had reached in the West in 1984.” The irony of scientists making such a call is not just

that they, as lovers of academic freedom, should encourage debate and dissension, but that the very nature of science precludes such a hasty willingness to assume the truth of its theories. Indeed, one of the criteria that differentiates scientific thought from other ways of viewing the world is its fallibility and willingness to listen to opposing arguments and evidence.

The call for debate is further enhanced by Mbeki's invocation of the credentials of AIDS dissenters. "The scientists we are supposed to put into scientific quarantine include Nobel Prize Winners, Members of Academies of Arts and Science and Emeritus Professors of various disciplines of medicine!"⁶ Those doubting the link between HIV and AIDS are not merely politically minded activists or conspiracy theorists, but scientists who on most any other issue would have their views taken seriously as to the appropriate argumentative threshold to establish causation. Mbeki rejects the view that these thinkers are to be quarantined like a communicable disease. The unwillingness to entertain their ideas, then, cannot be the product of a legitimate attitude toward investigation, but must be motivated by other considerations. Mbeki likens contemporary AIDS dissenters with previous challengers of orthodoxy at times when science failed to embody the pluralistic ideal. "It is suggested, for instance, that there are some scientists who are 'dangerous and discredited' with whom nobody, including ourselves, should communicate or interact. In an earlier period in human history, these would be heretics that would be burnt at the stake!" Mbeki casts the debate not just as a disagreement, but as a stance akin to the pseudo-scientific superstitions of old.

Mbeki emboldens his argument by accusing contemporary scientists of the very sort of religious fanaticism to which their methodology is philosophically opposed. He sees no difference between contemporary scientific dismissal of AIDS dissension and historical examples of witch hunters and book burners. "Some agitate for these extraordinary propositions

⁶ AIDS Dissenter Kary Mullis won the 1993 Nobel Prize in Chemistry.

with a religious fervour born by a degree of fanaticism, which is truly frightening. The day may not be far off when we will, once again, see books burnt and their authors immolated by fire by those who believe that they have a duty to conduct a holy crusade against the infidels. It is most strange that all of us seem ready to serve the cause of the fanatics by deciding to stand and wait.” This passage is particularly important for Mbeki’s argument in that it seeks to provide a scientific warrant for further debate. It redefines action—not in terms of implementing public policy—but as initiating public debate. Dissent from the status quo becomes the guarantor of the public good.

From these arguments we can see the outline of Mbeki’s operative proto-theory of science. For Lyne, proto-theories are not merely orientations to science or the world; rather, they do work in the evaluation of scientific arguments. While one may believe that free debate is a good thing, only when that belief becomes grounds to make or assess scientific arguments does it become proto-theoretical. Mbeki here uses the legacy of apartheid as a working model of how to assess knowledge claims. For instance, it is because of apartheid that Mbeki demands high levels of evidence and certainty for scientific claims and casts doubt on the Western consensus. Mbeki’s invocation of Western suppression of scientific debate throughout history weakens the orthodoxy’s claims to consensus and provides an opening for casting open debate and tolerance of dissent against the establishment as the most important issue in the controversy.

These proto-theoretical elements set the standard for Mbeki’s entire argument. He maintains, for example, that inconsistencies or ambiguities in our scientific knowledge must be resolved before policy decisions can be made. Indeed, this stance seems so straightforward that he can merely state the lack of evidence specific to Africa as reason to hold off on policy implementation, rather than having to show *why* the assumptions of Western scientists are

wrong. Even in the midst of rising death tolls, Mbeki insists on specific and credible evidence before policy to intervene can be adopted. These are formal conditions that must be met before assent to a policy argument is warranted, raising the threshold higher than the Western scientists would like.

Mbeki couples that argument with an appeal to openness. His allusions to burning books and authors and religious intolerance of scientific dissent for centuries in Europe mirror demarcation discussions in philosophy of science where modern science is contrasted with pseudo-science. Similarly, Mbeki invokes an ethic of fallibility and tolerance of dissent that is truly a hallmark of the contemporary *ethos* of Western science. Mbeki not only holds science to its own ideological version of itself, but also provides examples of how the experiences of his own country require a strong suspicion when debate is stifled. The status of South Africans as victims of apartheid becomes a core point in his approach to the assessment of knowledge claims. Even though the policy outcome is exactly opposite, this ethic of embracing dissent is also a hallmark of Mbeki's earlier arguments defending the drug Virodene. In 1997, Mbeki found a moral imperative to experiment with risky drugs. In 2000, he found a moral imperative to resist any drug regimens until all of the facts are in. But both positions champion the heretic, the scientist who stands opposed to the majority. A similar parallel can be seen in regard to importing ARV drugs. The Mbeki of the TRIPS controversy learned to mistrust pharmaceutical companies for blocking access to cheap drugs. Mbeki the dissenter is mistrustful of the assumptions about AIDS that have brought giant profits to those companies in the first place. By 2000, Thabo Mbeki was ready to mistrust AIDS science wholesale, even on the basic virology of the disease. Those conclusions are not operating just as political commitment, but as parts of an implicit theory of knowledge. The tenets of this emergent epistemology are clear. To command

assent, scientific arguments must be unambiguous, justified with the best possible evidence against all objections, and arrived at through a free and open process of debate. The source of the argument as well must stand up to any dissenters, otherwise the outcome is potentially racist. And if an argument cannot meet these criteria, then public policy should not be adopted based upon it. The legacy of apartheid provides the warrant for this stance.

2.7 THE LETTER'S RECEPTION

Other than in the eyes of a few AIDS dissenters, the letter from Mbeki to world leaders was a dismal failure. Not only did it fail to provide legitimacy for Mbeki's call to debate or provide cover for his creation of the scientific panel to study the question of AIDS, it turned international attention even further to the fringe nature of his arguments and his government's failure to act in the crisis. Mbeki soon became a hero to the handful of AIDS dissenters throughout the world and an example of foolishness and carelessness for almost everyone else.

The deeply felt need by Mbeki's Western audience to act immediately was an overarching theme of their public responses. For his critics, every day of debate and delay was one more day that people died from AIDS. AIDS researcher Michael Saag said, "This is the scientific community saying enough is enough. We have so much to do and so little time that we have no time left for these discussions" (Brown 2000). Activists on the ground in South Africa were even more vociferous in their denouncements of Mbeki. "Mbeki's panel? Who the hell cares?" asked Charlene Smith, an AIDS activist who noted that 75 percent of pediatric deaths at Johannesburg public hospitals are AIDS-related. 'We're dying down here,' Smith said bitterly.

‘Play all the intellectual games you want on the Internet, but we’re dying down here’” (Chicago Tribune, April 14, 2000).

Mbeki would attempt to fall back on the contention that he had never personally questioned the link between HIV and AIDS (yet, a position with which he would soon become synonymous), merely that he was advocating further study and debate. It is true, his letter never explicitly argues against the commonly held scientific opinions on the subject. But critics conflated the call for debate with an argument against action, and action was what almost all observers thought was most vital. In fact, in the eyes of many, the only reasons that Mbeki could have for favoring further discussion were nefarious. Some would maintain that Mbeki’s embrace of AIDS dissent was a strategy to avoid the hefty bill of providing drugs. The New Scientist wrote that “financial considerations rather than scientific illiteracy seem to be emerging as the real factors behind the government’s position” (Le Page 2000).

Some thought his dissent to be the ravings of a conspiracy theorist. “Mbeki ventured into new territory even stranger than his well-known skepticism about the link between HIV and AIDS. Now he suggested that the CIA, international drug companies and other forces were conspiring to ruin him because of his independent view on AIDS and his critique of the world economic order. According to the report by the Johannesburg-based Mail and Guardian, Mbeki said his advisors were finding out who was spreading the word that he is ‘deranged’” (Masland 2000). Mbeki was having rooms examined for listening devices before private meetings. Speculation was rampant as to whether Mbeki’s views on AIDS would cost him his presidency. Thabo Mbeki’s journey toward dissent was now complete and irrevocable. What is clear is that most observers found Mbeki’s motivation to be anything but founded on an interest in the truth,

and never took seriously his call for further debate and study. The man who had years before been described as politically astute and scholarly was now openly being likened to a paranoiac.

2.8 ANALYSIS OF THE LETTER

On the face of it, Mbeki's appeals to discussion of HIV and AIDS seem right in line with both the spirit of science as fallible as well as the impulse shared by many toward open debate and democratization of science. It is true that there is a small group of fully credentialed scientists (including Nobel Prize winners and major research scientists; see chapter 3) who hold the view that AIDS drugs are toxic and that attacking HIV is not the best way to treat the disease. It is also true that the research of these dissidents has appeared in recognized scientific forums such as the Proceedings of the National Academy of Sciences and journals like Bio/Technology and Current Medical Research and Opinion. Given this level of scientific dissension, it is quite possible for one to make technical arguments that challenge the certainty with which we hold the prevailing views surrounding AIDS. Such discussions had been taking place in scientific forums for at least fifteen years.

But Mbeki's letter was not a journal article. It was a piece of public, political rhetoric that spoke to issues of policy. And as such, the standards for evaluating its arguments are different from those of a technical forum. The history of AIDS discourse that informed his critics led to a very different response than Mbeki was hoping for. Tremendous amounts of intellectual capital had already been spent a decade earlier to convince the world that AIDS was a serious problem, worthy of study and resources. The "And the Band Played On" mentality of many Western governments had been replaced by a strong dedication to fighting the disease,

both through education and research. To suddenly have that (supposedly) world wide consensus dashed by the leader of the world's most infected country seemed to many scientists to be rehashing a long settled debate against the best interests of those people that AIDS policies were supposed to help. Doing so in their eyes made no sense whatsoever. As Anthony Fauci of the National Institute of Health put it, "It's sort of like a bunch of people saying the Earth is flat, and then you have to get everyone in the aerospace world to say that the Earth is round. That's crazy" (Brown 2000).

In an argumentative context where dissent on AIDS etiology is the equivalent of dissenting on the shape of the Earth, Mbeki's challenge is astronomical. To be persuasive, the President's arguments must overcome the assumptions of nearly the entire Western scientific establishment regarding how claims to causality in retrovirology are made. Mbeki attempted to accomplish this by appealing to a rigorous view of scientific debate, one that holds science to its word that it will always entertain opposing arguments. But Mbeki's implicit comparisons of Galileo and Salem to the contemporary AIDS etiology debate were destined to fail. This was not a debate in scientific methodology. He did not write for a scientific conference where time was unlimited and debate could commence without material consequences. This was a moment where policy implementation was the issue and the lives of millions were at stake. Yet Mbeki argued for taking more time to study.

The difference here could also be viewed as a dispute over argument fields or spheres. Theorists have long held that arguments are weighed differently according to how standards of proof are used in different situations and for different purposes. Arguments are of a different logical type in a courtroom, for example, than in a geometric proof. Stephen Toulmin's (Toulmin 1958) discussion of field dependent aspects of arguments is a classic explication of this point.

He notes that observers must keep distinct two aspects of any modal term in an argument. The *force* of a term reflects what he calls the “practical implications of its use” (30), whereas a term’s *criteria* are the standards by which we evaluate whether that term is appropriate to use in any given context. The former is constant; to say that something is “caused” does the same work in any argument. But determining at what point we are warranted in asserting causality, Toulmin argues, is dependant on the argumentative field in which that judgment is made. One event causes another at a different point in a courtroom than in a laboratory. He cautions against selecting one set of criteria and elevating it “into a position of unique philosophical importance” (34). Simply because one set of criteria may be more “scientific” does not privilege it in contexts where political, legal, or moral considerations are paramount. Examining the AIDS debate in Africa highlights this exact point. President Mbeki used post-apartheid political criteria as warrant for imposing a strict interpretation of scientific causality for AIDS. Mbeki proposed applying strict laboratory standards of causation on the political question of when public policy ought to be adopted. His critics maintained that contextual factors such as the spread of an epidemic and the deaths that result made less rigorous criteria for causation essential. Mbeki and his critics clashed not only on the substance of AIDS science, but also on the epistemological level. They held different views about when making causal claims are warranted. Ironically, it was Mbeki’s view that is more “scientific” insofar as it held a higher standard of proof for knowledge claims.

But on what grounds can those who favor aggressive AIDS policy justify using a lower standard of scientific proof? Since policy contexts are public ones that involve not just data but also ethical issues, it is entirely legitimate to defend standards of proof that foreground those issues. Mbeki seems to be arguing from the assumption that standards of proof that reign in

technical argument spheres should dictate the AIDS policy in South Africa. In his view, if the scientific questions are unresolved then public policies different from the status quo should be held up. While it is certainly the case that further deliberation is a “policy,” something that is being done, it is not one that requires one to change her actions. But deciding that the claim “HIV causes AIDS” is certain enough to act upon requires a different type of policy, where different action are taken against the disease than had been before. But there is serious question whether technical standards for when that move from uncertainty about a theory toward acceptance that licenses changes in the status quo should be used in a political debate.

Thomas Goodnight describes the technical sphere of argument as one that prescribes limited rules for evidence and narrow criteria for judgment, so that those with expertise can be easily identified and their interest can be pursued (Goodnight 1982). These limits correlate with high standards of proof and evidence in technical forums. Mbeki’s demands for better evidence in order to establish the etiology of AIDS are fitting in these rigorous technical forums. Likewise, the President’s call for a panel of scientific experts to evaluate the evidence reflects the restricted access of interlocutors in a technical forum. If Mbeki wanted to answer this technical question, than an advisory panel of experts may very well be the way to do that.

However, the question of whether the government should provide ARV drugs involves more than just technical argumentation. It is a question for deliberation in the more open public sphere. Therefore, issues important to the broader public overrule the dictates of technical argumentation. As Goodnight argued, moving into the public sphere makes personal or technical disagreements germane only insofar as they are congruous with the public interest (Goodnight 1982). Certainly, considerations of the material consequences of continued study on the sick and dying constitute one of the practices of public forums that make purely technical warrants for

shaping science policy irrelevant. Mbeki cannot just surrender public sphere decision over to a panel of experts, or bracket those issues until the technical questions are completely resolved. There are public impacts to either implementing drug policies *or blocking them*. Considering these implications is the ethical duty of the government in a democracy. Expertise in those issues is not a product of scientific credentials but lies with the people and their representative.

Thabo Mbeki's argument is predicated on this point. His own conception of the public good, one that insists on open debate and tolerance of dissent, is strongly influenced by his perceptions of scientific arguments. If Mbeki had completely ignored the policy implications of not providing ARV drugs, this analysis would be much more straight forward. But the letter is quite vocal about the public interest. His conception of the public good does not rest on saving lives, as the scientists see it. Rather, his view of the public good is focused on protecting dissent. Just as it was with Virodene, intimidating and silencing dissenters regarding the efficacy of ARV drugs is antithetical to the public good. For Mbeki, the material consequences of silencing debate are the same as those of the political oppression under apartheid, and are potentially more devastating the health consequences of delaying the availability of possibly beneficial drugs.

The question has now become one of burden of proof. Since there are two competing views of what is conducive to the public good on the table (responding to an epidemic or protecting dissent), which should be the default position at a moment of uncertainty? In a general sense, this dilemma applies to many public policy controversies. Competing views of what will enable the public good often clash at such times, and policy makers always have to render a judgment about those disagreements where they occur. In the case before us, deciding which policy to adopt requires a decision on whose view of the public good should reign supreme. Both sides of the debate bring with them predetermined answers to that question. Does

presumption lie with the collective wisdom of the Western scientific world about the urgency of providing AIDS drugs or with the experience of oppression that Mbeki uses to motivate his argument for further debate? Mbeki's international audience for this letter had already made the decision that the Western orthodoxy could be trusted. That presumption cannot be defeated merely by asking questions about the possibility of differences between African and Western AIDS. Mbeki would have to build a positive case as to why a discrepancy between transmission methods or death rates in the West and Africa matters. In the eyes of the President's international audience, the burden of proof rested squarely on Mbeki, and his letter fails to meet that burden. It is, after all, only a defense of further debate, and that debate has the effect of blocking needed drugs. Even if in a technical sense the question of etiology is never fully closed and scientists must always answer challenges to any theory, there must be a level of certainty at which policy action is permissible. Such a threshold had been reached on AIDS in the minds of Mbeki's audience, and the burden of proof was on the President to prove otherwise.

But Mbeki's arguments imply that the burden of proof is on the Western scientists to show that they are correct in their assumptions about AIDS. Forcing a reconsideration of scientific orthodoxy is by no means a far-fetched idea for someone in Mbeki's position. Richard Fredland (Fredland 1998) has argued that the historical legacy of colonialism may make Africans wary of Western medical solutions to epidemics. "This [past oppression] has left the poorer African states particularly vulnerable to various Western intrusions, from economic interventions to commercial dominance to being the passive recipients of AIDS programmes conceived elsewhere" (566). The "Africans as human guinea pigs" mentality of much of the West has left a bias against the orthodoxy in the minds of many Africans. It is not unreasonable for them to demand evidence that the West is not imposing their experience with AIDS on South Africa as

an excuse for economic exploitation and experimentation. Mbeki demanded that scientists defend their assumptions about AIDS in Africa with specific evidence. He required that all voices be heard on the issue and was distrustful of an attitude that views dissent as counterproductive. From this perspective, Western science had to prove that it was AIDS that ravaged the continent, not something else, and that the process of discovery that led to that conclusion had been legitimate. Otherwise, Mbeki's experience told him to champion dissent in the interests of getting to the truth.

2.9 THE REJOINDERS

It is easy to see the role of the burden of proof disagreement in the public responses to Mbeki's letter and policies. Orthodox scientists asserted that he has failed to make any case and that further debate was unnecessary and dangerous. The "Durban Declaration," a statement signed by over five thousand AIDS scientists and published in Nature (Editors 2000), concluded that "the evidence for the link between the virus and the disease, 'is clear-cut, exhaustive and unambiguous, meeting the highest standard of science. The data fulfill exactly the same criteria as for other viral diseases, such as polio, measles and smallpox. . . . HIV causes AIDS. It is unfortunate that a few vocal people continue to deny the evidence. This position will cost countless lives'" (Brown 2000). In their opinion of the Declaration's signatories, those who oppose drug treatments for the infected have simply misread the science. In their opinion, there are no legitimate grounds for mistrust and further discussion at the expense of action is contrary to the public interest.

Thabo Mbeki was not the only one misreading his audience in this debate. The Durban Declaration was the most high profile attempt on the part of orthodox scientists to alter the President's views. It too failed because it did not directly address the implicit views of scientific argument shaping Mbeki's beliefs. The declaration puts its rhetorical force behind reasserting the existing evidence for an HIV-AIDS link and then rejecting any disagreement as folly. The demands for evidence specific to Africa were deemed uncalled for. The Declaration's authors ignored the historical legacy of apartheid, the mistrust of censorship, and the historical construction of science as tolerant of dissent that are fundamental parts of Mbeki's argument.

If such a performance was intended to preach to the converted, then it may have been successful. But if the target audience was Mbeki, then it must be clear that simply repeating the arguments for a link between HIV and AIDS, arguments that Mbeki has already publicly called into question, as if merely their repetition would command assent, did not recognize the proto-theoretical elements that influenced Mbeki's thinking on the matter. While the scientific community may not have found Mbeki's strict standards of proof for AIDS policy persuasive, *he clearly did*, and addressing his concerns is a prerequisite for a successful argument in the man's own mind. The Declaration mirrors Mbeki's initial exposure to AIDS dissent in the pages of The Citizen. In that debate between Brink and Martin, a dissenting viewpoint founded on alternative approaches to scientific evidence and causality is presented. The orthodox responses make no attempt to address those charges directly. Rather, the reader is assured that those issues have already been dealt with and is urged to trust implicitly the collective judgment of the vast majority of scientists.

Both the Declaration and Martin's arguments suggest a wariness on the part of the orthodox scientists to engage with the dissidents on their own terms. It is often noted that

engaging in debate with fringe advocates accomplishes little but increasing the profile of that point of view, risking more conversions rather than dissuading current believers. Do not dignify the cause of Holocaust deniers, for example, by debating them; that tactic only gives them a platform to disseminate their views. But Mbeki changed this political calculation when he based policy on dissent in South Africa. One may avoid drawing attention to irresponsible points of view when those views remain on the sidelines. But once those critics have the power, it is no longer possible to ignore them. Calling such dissenters “crazy” or “evil” or “flat-Earthers” simply feeds Mbeki’s arguments regarding the suppression of meaningful dissent as a warrant for debate and delaying policy. It is hard to imagine a context where such an *ad hominem* technique would ever be productive. The key is to develop an argument that acknowledges the good faith of one’s opponents (since they are the ones dictating the agenda in this context) while at the same time pointing out areas of disagreement.

This analysis has exposed several salient points of disagreement between Mbeki and his critics on the issue of South African AIDS policy. But all of these points of clash operate below the surface. How rigorous should standard of proof for causality be? Which conception of the public good, health or tolerance of dissent through open debate, should be our primary concern? Where should the burden of proof lie for such claims? Members of both sides argue as if their answers to these questions were a matter of fact; no attempt is made to explicate their position *in direct response* to the logic of the other side. Even if these issues are stated contentions in the arguments of the two sides, they are still doing argumentative work in the controversy. At its core, this is a clash between proto-theories of science. These implicit points shape the arguments in this case. Failure to explicitly address these issues limits clash and prevents meaningful progress on the argument. Both sides are so seemingly opposed that neither can admit any logic

in their opponent's position. And both sides see conspiracy theories, ignorance, or malice as favored explanations of the disagreement.

One of the most curious aspects of this debate is that there are indeed substantial issues of agreement between the two sides. There may very well have been fruitful ground for some sort of consensus. Mbeki's argument is in one sense stating that the best route for understanding AIDS in Africa is to deal with the unique aspects of abject poverty and underdeveloped public health infrastructure on the continent. Such a belief is not only plausible, it is compatible with the orthodox version of AIDS science. A few commentators have tried to divorce Mbeki's co-factor arguments from his broader AIDS dissent. An editorial in the journal AIDS Patient Care and STD's by Dr. Jeffrey Laurence (Laurence 2000) noted that "James Wolfensohn, President of the World Bank, said virtually the same thing [as Mbeki]. The decision of his organization to accelerate the fight against AIDS was an example of its commitment to 'fight poverty in all its manifestations'" (289-290). As a consequence, according to Laurence, the dissenters may be accidentally insightful. "And in one sense—clearly not the sense these HIV deniers mean—they are correct. Poverty and AIDS are intimately linked" (289). It is common for critics of Mbeki to quickly grant poverty as a co-factor in AIDS and then return to the more controversial aspects of his rhetoric. The Durban Declaration itself makes such a case:

As with any other chronic infection, various co-factors play a role in determining the risk of disease. Persons who are malnourished, who already suffer other infections or who are older, tend to be more susceptible to the rapid development of AIDS following HIV infection. However, none of these factors weaken the scientific evidence that HIV is the sole cause of AIDS.

Focusing on poverty as a co-factor might have provided Mbeki some of the African focus that he sought. And if Mbeki was convinced that the Western scientific establishment was interested in addressing these African elements, he might have been less inclined to reject all of AIDS science. There really was no need for the Durban Declaration to be so monolithic, leaning so heavily on HIV as the sole cause of AIDS, and only mentioning co-factors in passing. Orthodox science readily admits that environmental conditions have significant influence on the development of full blown AIDS. But they chose to highlight their differences with Mbeki, not their points of agreement.

Would that the two sides could come together on this issue! But any possibility of consensus was dashed by the rhetorical performances of each side. Mbeki coupled his reasonable argument to explore co-factors with what his critics saw as an unreasonable impulse to entertain dissent and restrict action. And the orthodoxy's charges of ignorance against Mbeki poisoned the well against any attempt to get the President to come around on the efficacy of ARV drugs. Had the sides not grounded their disagreement in antipathy but rather in a frank discussion about the issues of causality and burdens of proof that lay at the bottom of the debate, they may have reached consensus on both access to drugs and means to address larger issues of poverty. But such was not the case. As the Durban Conference on AIDS approached, Mbeki's opening remarks were widely anticipated. The speech would further entrench the sides.

2.10 THE DURBAN CONFERENCE

At the opening of the International AIDS Conference in Durban on July 9, 2000, Mbeki gave a speech before an audience that was described as an “Mbeki-bashing circus” (Altenroxel 2000). The speech (Mbeki 2000) rearticulates his arguments regarding the uniqueness of the African experience of AIDS and presses the issue of poverty as an alternative causality other than HIV for the prevalence of AIDS deaths. He opens by pointing out that most of the AIDS scientists in the room had never been to Africa before. Mbeki reminds them that democracy in South Africa was still in its infancy. “You meet in a country to whose citizens freedom and democracy are but very new gifts. For us, freedom and democracy are only six years old.” Mbeki had already noted in his letter to world leaders that the uniqueness of the African AIDS epidemic and the lessons of its political past justified a different approach to the disease. South Africans, he implies, do not take foreclosing debate and dissent lightly. He then quotes the World Health Organization’s 1995 report on extreme poverty as a co-factor in the development of full blown AIDS, arguing that this phenomenon is one that will be ignored by the conference, cloistered in five star hotels. “You will not see the South African and African world of the poverty of which the WHO spoke, in which AIDS thrives--a partner with poverty, suffering, social disadvantage and inequity.” To focus only on HIV is inadequate. The history of South Africa mandates a tolerant attitude toward dissent and debate. “As an African, speaking at a Conference such as this, convened to discuss a grave human problem such as the acquired human deficiency syndrome, I believe that we should speak to one another honestly and frankly, with sufficient tolerance to respect everybody’s point of view, with sufficient tolerance to allow all voices to be heard. Had we, as a people, turned our backs on these basic civilised precepts, we would never have achieved the much-acclaimed South African miracle of which all humanity is justly proud.”

Mbeki then acknowledges the international firestorm that had erupted after the publication of his April letter, and argues that the fervency with which his comments were criticized only supports his arguments about a conspiracy of silence. “Some in our common world consider the questions I and the rest of our government have raised around the HIV-AIDS issue, the subject of the Conference you are attending, as akin to grave criminal and genocidal misconduct. What I hear being said repeatedly, stridently, angrily, is - do not ask any questions!” Here we see how the orthodoxy’s inability to address Mbeki’s arguments on their own merits, favoring instead a repetition of their position, has emboldened Mbeki’s intransigence. The President came to see the scientific panel, and the delay in providing drugs until that panel met, as more necessary than ever. Mbeki pressed the claim that the scientific community was divided and that claims to consensus on the part of the orthodoxy were hasty.

I am pleased to inform you that some eminent scientists decided to respond to our humble request to use their expertise to provide us with answers to certain questions. Some of these have specialised on the issue of HIV-AIDS for many years and differed bitterly among themselves about various matters. Yet, they graciously agreed to join together to help us find answers to some outstanding questions.

Not surprisingly, Mbeki’s further plea for debate was again met with swift condemnation. His arguments were once again seen as dilatory and conspiratorial. Many attendees of the conference walked out on Mbeki’s speech. Famous rabble-rouser Winnie Mandela turned the notion of an African Renaissance back on Mbeki during a rally held outside of his address to the Durban conference. “AIDS exists,” she asserted. “H.I.V. causes AIDS. We cannot proclaim this century the African century and then ignore the AIDS pandemic as some political leaders are” (Swarns 2000). The belief that anti-

Western conspiracy theories were the real motivator behind the President's views was given credence when an internal African National Congress memo was leaked to the press that "talks about an 'omnipotent apparatus,' a vaguely defined conspiracy made up of drug companies, scientists and Western governments, which promotes the conventional view of AIDS and touts the value of anti-AIDS drugs in order to denigrate black Africans, make money out of their misery, and then kill them" (Dyer 2002). The New York Times editorial board opined that "his [Mbeki's] misunderstanding seems to be rooted in a defensiveness about race. In one speech, he said that those advocating AIDS treatment viewed black people as 'germ carriers and human beings of a lower order'" (Editors 2001). Mbeki's position was clearly intensifying, becoming even more extreme in the face of the nearly monolithic criticism of his policies. His move to the conspiratorial obviously did nothing to improve his standing in the eyes of his critics. But, then again, he was the President; he did not need international approval to explore the etiology of AIDS. Moreover, his domestic political support remained unassailable.

The camps had been formed. Mbeki's advisory panel was preparing to meet the following summer. Scientists from all over the world would come to debate the etiology of AIDS and recommend policies for South Africa. In chapter four, we will revisit that panel to explore how they attempted to solve this problem. But these scientific debates that Mbeki sought to spark through his advisory panel had been occurring for many years prior to their South African incarnation. In fact, the rise and fall of AIDS dissent in the United States is an essential element to this story. This is the history that shaped the vociferous rejection of Mbeki's rhetoric by the orthodox scientists. And it was the remnants of that American debate that spurred Mbeki on to explore the issue himself. To

appreciate this context, the next chapter will take a rhetorical view of the initial formations of AIDS dissent and their migration to public arenas.

3.0 CHAPTER THREE

In chapter 2, we saw how the international response to President Mbeki's embrace of AIDS dissent was swift and scolding. In this chapter, we will closely examine his critics to see why they responded in this way. While almost all of this material predates Mbeki's AIDS rhetoric of 2000, studying the Western origins of AIDS dissent is important to the story of South African AIDS rhetoric for several reasons. First, as dissent moved from the technical scientific forums where it originated into the public arenas where Mbeki would encounter it, the arguments shifted rhetorically in ways that would later be reflected in Mbeki's own rhetoric. Second, orthodox scientists were predisposed by the initial American battles over AIDS to reject dissent well before Mbeki arrived on the scene. To understand the responses to Mbeki's dissent, we must understand how the history of dissent in the United States framed the issue for Western critics. Besides, the migration of AIDS dissent from the Proceedings of the National Academy to the internet, television, and popular books is in and of itself a fascinating rhetorical story. By tracing that journey, we will also gain an understanding of the assumptions and experiences that constituted the response to Mbeki's arguments yet to come.

This chapter offers both a temporal and conceptual extension of the current scholarly understanding of the AIDS dissent, with particular attention to its application in South Africa. Steven Epstein's Impure Science (Epstein 1996) explores the influence of AIDS dissent during the initial public disputes over government policy in the United States. But Epstein's work

cannot account for the South African case for several reasons. Unlike South Africa, his story of AIDS dissent in the United States is one where the outcome was largely predetermined by the deep bias toward action that developed early in the outbreak of the epidemic. Even if they did drag their heels on funding and support, American policy makers in Congress, the National Institute of Health and the Food and Drug Administration in the late 1980s and throughout the 1990s never questioned the etiological role of HIV or the efficacy of ARV drugs once the epidemic exploded. But in South Africa, all of these issues were on the table, and the resonance of the dissenters' arguments in those halls of power force their reconsideration. Another contribution this chapter makes to our understanding of AIDS dissent is how, once they were denied access to scientific forums, the dissenters adapted their arguments to appeal directly to the general public. This shift is reflected in Mbeki's own articulation of AIDS dissent, and is not covered in Impure Science. That book ends in 1997. From then until Mbeki's 2000 letter, dissenters would adapt their arguments to public audiences through books, speeches, and websites until their triumph in South Africa thrust them back into the public spotlight.

To undertake this analysis, the chapter will address the following issues. First, it will describe the initial AIDS dissenting scientists, who they were, and what they argued. Then, the response by the orthodox to those arguments will be detailed. After those initial clashes, many of the AIDS dissenting scientists made the switch from technical forums to public advocacy. At the same time, lay people began to adopt AIDS dissent and disseminate it in those same forums. The inclusion of lay advocates also brought to the surface many of the political and moral arguments for AIDS dissent that Mbeki would deploy in his own rhetoric. We will here undertake an extended analysis of the arguments of one such lay AIDS dissenter, Christine Maggiore. She is a leading representative of the broader discourse of popularized AIDS dissent.

The chapter will conclude with an extended analysis of a rare direct rhetorical exchange between Maggiore and a member of the orthodoxy. But first, we will take up the substance of AIDS dissent and the profiles of its early advocates.

3.1 THE SCIENCE OF AIDS DISSENT

AIDS dissenting scientists began to articulate their theories shortly after Robert Gallo's announcement of HIV as the cause of AIDS. Their arguments vary in places but share a common allegiance to several core principles. This section will first introduce some of the most famous dissenters and after that unpack their arguments.

3.1.1 The Advocates⁷

The most famous AIDS dissenting scientist is Peter Duesberg, Professor of Molecular and Cell Biology at the University of California at Berkeley. Duesberg isolated the first cancer gene in 1970 and worked for decades mapping the genetic structure of retroviruses. He received a seven year "Outstanding Investigator" grant from the NIH and in 1986 was elected by his peers to the National Academy of Sciences. By all accounts, Duesberg's research was exemplary, and he was considered a pillar of the field. But this sterling reputation was quickly tarnished by his baffling AIDS dissent. "To his detractors, who are legion, Duesberg is at best a maverick who refuses to accept facts held as dogma by his colleagues or at worst a kook who perversely refuses to submit to the obvious, perhaps out of a desire to grab headlines" (Goode 1996). At the end of

⁷ Selecting out representative dissenters is a difficult task, as there is significant disagreement amongst themselves as to what AIDS dissent entails. The following individuals are often cited in the AIDS dissent literature and were also invited by President Mbeki to contribute to his Presidential Advisory Panel (see chapter 4).

the 1980s, Duesberg published two articles in the Proceedings of the National Academy of Sciences challenging the HIV theory of AIDS causality (Duesberg 1989; Duesberg 1991). These articles are considered the first scholarly articulations of AIDS dissent. Other publications by Duesberg on AIDS dissent have appeared in Cancer Research, Pharmacology and Therapeutics, Biotechnology, and the International Archives of Allergy and Immunology.

The most prolific AIDS dissenting scientists are the “Perth Group.” The group was founded at the Royal Perth Hospital, University of Western Australia. Dr. Eleni Papadopoulos-Eleopoulos, a biophysicist, is the acknowledged leader. The other members include physician Val Turner and pathologist John Papadimitriou. Their research has appeared in Current Medical Research and Opinion, the World Journal of Microbiology and Technology, Genetica, and Emergency Medicine, among other journals. They are most famous for studies defending the common belief among dissenters that AIDS is a toxicological condition that comes from cellular damage relating to exposure to anti-oxidative drugs such as narcotics. The Perth Group also argues that ARV regimens have a similar toxic effect and are likely the cause for much of the AIDS cases in the world.

A third heavyweight of AIDS dissent is Robert Root-Bernstein, a Professor of Physiology at Michigan State University. In an interview with GQ (Graham 1993), he explains how his AIDS dissent developed. Root-Bernstein was a research assistant for Thomas Kuhn at Princeton during his graduate study.

In putting his mind to AIDS, Root-Bernstein applied the method he learned from Kuhn: Read as much of the original research as you can, read it chronologically, and try to spot the discoveries that created forks in the theoretical road. Thus, beginning in 1988, each evening after classes, Root-Bernstein would lug home reserve books and stacks of

photocopies from the library and hole up in his small study off the dining room. Over the following four years, he found what he says is compelling evidence that HIV is not the Virus. In fact, he believes that the Virus - that is, a single infectious agent - probably doesn't exist. He even has doubts that AIDS is an infectious disease per se.

Framing AIDS dissent in such terms, as a scientific exploration of the highest rigor in contrast to the hasty consensus around HIV of orthodox scientists, is typical of dissenting scientists. Root-Bernstein's subsequent publications on the subject have appeared in Perspectives in Biology and Medicine, Research in Immunology, and the Journal of Theoretical Biology.

Many of the objections to AIDS orthodoxy by these scientists are based on process. Proper peer review was not followed before the HIV theory was brought to press and elevated to fact in the eyes of the world. Dissenters have used the few opportunities afforded them to publish in scientific journals to claim that the evidence supporting the HIV theory is not up to the standards of other viruses. Most assert that drug consumption, both narcotic and anti-retroviral, and poverty are the cause of AIDS. In Africa especially, they claim that poor health conditions are the real cause of the deaths, not HIV. We can see why they make such claims by analyzing their scientific arguments.

3.1.2 Virology

The traditional standard for claiming a causal connection between a virus and a condition is the so-called "Koch Postulates." These require that a virus first be detectable, then isolated from the host and grown in a pure culture. After that, healthy animals must be infected when this pure culture is introduced, and even then the microorganism must be re-isolated from this newly

infected animal and grown once again in pure culture. Only after all of those steps have been performed has one demonstrated etiology.

The Postulates are the “gold standard” for establishing etiology. But they require many time consuming steps to meet. In fact, they sometimes are met well after public health policy has already acted against the disease. For example, the recent SARS outbreak in Asia was only known for certain to be caused by a corona virus once Koch’s Postulates had been met by scientists. But many of the highly publicized SARS preventative measures like quarantining were put into place well before the Postulates were confirmed (Altman 2003). Duesberg in particular has often argued that AIDS virology has yet to meet Koch’s Postulates, in particular in the case of isolation of the pathogen (Duesberg 1989). Orthodox scientists disagree about this issue. One response to the claim that AIDS fails Koch’s Postulates is that retroviruses like HIV are unique, ones that Koch could never have anticipated. Therefore, isolation of HIV is not necessary to prove causality. “They are a useful historical reference point, but were not regarded as rigid criteria by Koch himself and should not be so regarded today” (Blattner 1988). Another response to the challenge from dissenters is to claim that HIV has indeed been isolated. For example, the National Institute of Health argued in 1995 that Koch’s Postulates had been met by AIDS scientists (National Institute of Allergy and Infectious Diseases 1995). The dissenters rebuff both of these answers to the question of Koch’s Postulates, the former as a violation of a clinical “gold standard” and the latter as sloppy science.

The virology debate highlights two epistemological issues that will be important in the later public debates about AIDS dissent. One is the question of how standards of evidence and proof should adapt to emerging science. Second is the question of how the presence of an ongoing epidemic should affect our standards of proof for scientific arguments. Retrovirology is

new, and people are clearly dying from something at an alarming rate. Should science have lower thresholds for causality in such a context than it would for other viruses?

3.1.3 Anti-Retroviral Drugs

Even if dissidents were willing to lower their certainty threshold in light of the nascent state of retrovirology, they would not recommend ARV drugs for treatment of AIDS because of their toxicity. Azidothymidine (AZT), the main drug in the AIDS “cocktail” is chemotherapeutic; it destroys living cells in a bid to block the spread of the retrovirus (hence anti-retroviral drug) in much the same way that chemical treatments against cancer destroy both tumors and healthy cells at the same time. And, like other chemotherapies, the side effects of the drug can be severe for the patient. For a group of scientists who deny the link between HIV and AIDS and who claim that chemical toxicity is the true cause of the condition, the use of ARV drugs to combat AIDS is more than ineffective; it is quite possibly responsible for the disease itself (Papadopoulos-Eleopoulos 1999; Chiu 1995). Even after AZT was coupled with other drugs in the AIDS cocktail to increase the potency of the entire regimen, the toxic effects of these drugs remained.

Deciding whether to use ARV drugs is a question of our level of certainty regarding their effectiveness. Everyone agrees that ARVs are poisonous (that is how they work). One would only want to take those drugs if the chances of their working outweighed the side effects. And since dissenters maintain that HIV does not cause AIDS, or at the very least that we are not sure that HIV causes AIDS, then risking the ill effects of ARV drugs is foolish. Given the choice between the uncertain etiology of AIDS and the known toxic effects of the AIDS cocktail, the dissenters opt for the less ambiguous option. This debate is an epistemological one; how certain

are we that HIV causes AIDS, and are we willing to prescribe indubitably toxic drugs based on that proposition?

3.1.4 Epidemiology

The other major scientific issue considered by AIDS dissenters is epidemiology. By its nature, the study of the social spread of diseases involves scientific arguments that are more speculative and less certain than other branches of medicine. While a physician may be able to determine a causal relationship between virus and disease in any one patient through observation or testing, finding causality across one hundred thousand patients must be inferential. Making broad epidemiological claims requires statistical sampling and modeling. While a disease outbreak may be caused by a virus, it might also be significantly influenced by poor sanitation or behavioral factors or seemingly unrelated events. As a result, dissidents commonly criticize epidemiology as too inexact, especially in regards to claims about AIDS in Africa.

Theories of causality in epidemiology have received significant scholarly attention in recent decades. Mervyn Susser (Susser 1973) has noted that epidemiologists have three approaches at their disposal to determine the cause of an outbreak: “case studies, experimental laboratory studies, and population studies” (5). Only the second offers the opportunity for “the investigator [to] achieve great precision in his measures, and rigorous control of his operations, so that sound inferences can be drawn” (5). Of course, in the midst of an outbreak across an entire nation or continent, case studies or statistical sampling are often the only evidence available to make causal claims. Susser’s preferred “sound inferences” are not possible in that context. And since epidemiology relies on such inferential forms of evidence, laboratory levels

of certainty can never be guaranteed. Epidemiology stands between social and natural science, dealing with both natural science and human activity.

The result is a reliance in epidemiology on “causal inference.” In the absence of laboratory studies, any one epidemiological theory for the cause of the societal spread of a disease is likely underdetermined. A study may show that exposure to chemical X caused cancer in several patients, but how can I know for certain that it caused much of the other instances of cancer found in the same area? To compensate, epidemiologists routinely engage in a review of all extant studies. None of them alone may be strong enough to prove causality, but taken together the researcher is able to determine which theory is the most plausible. For the purposes of making health policy, the most plausible causal theory will be used.

The technique is very common in all manner of public health debates. Causal inference is used to assert a link between smoking and cancer, between drinking red wine and fighting cancer, and between obesity and morbidity (Weed 1997). In all of these cases, the inferential claims through causal inference are never absolute. Epidemiologists cannot and do not claim that everyone who smokes gets cancer or that all obese people develop heart conditions. But putting together all of the studies of smokers who develop cancer permits a limited, inferred causality. And many claim that this inferred causality is enough to justify public health policy or finding legal liability. The same argument is made by orthodox scientists for HIV and AIDS. It is true, as dissenters routinely point out, that many HIV infected people do not develop full-blown AIDS. And yet, orthodox scientists still claim that HIV causes AIDS. Their opponents assail the notion of causal inference as inherently uncertain and unscientific, in much the same way that opponents of anti-smoking legislation attack the link between nicotine and cancer. Dissenters

attack the very idea that individual cases can be taken together as sufficient evidence to prove causality.

3.1.5 HIV Testing

The primary means by which data about AIDS infection is collected is through HIV testing, which constitutes one of the most common points of attack by AIDS dissenters. Everyone agrees that HIV tests do not technically test for the virus itself. It is thought that HIV does not itself attack the patient, but the damage is done through fragments of Ribonucleic acid, or RNA, which invade healthy cells and copy the DNA of HIV. In 1995, it became possible to detect RNA fragments in the blood through a process called Polymerase Chain Reaction, or PCR. Kary Mullis won the 1995 Nobel Prize for this discovery. Berkeley researcher David Ho, Time's 1996 "Man of the Year," applied the technique to AIDS patients, and developed an AIDS test that looks not for HIV but for these RNA fragments. HIV positive people are now designated by their "viral load," which is a count of RNA fragments detected through PCR tests. Dissidents, including Mullis himself, reject the notion that AIDS tests have any connection with HIV. Rather, the fragmentary RNA could have been caused by cellular damage as a result of exposure to toxic agents, such as ARV drugs (Papadopoulos-Eleopoulos 1997).

Critics also doubt certainty of the results that HIV tests produce. The standard first HIV test is the Enzyme Linked Immunosorbent Assay (ELISA) test. Dissidents claim that the ELISA is highly susceptible to false positives. Some argue that a series of conditions ranging from tuberculosis to pregnancy potentially create the RNA materials that the tests measure (Maggiore 2000). Standard operating procedure after a positive ELISA test is a confirmatory test by more accurate, and expensive, procedures such as the Western Blot. But dissidents maintain that these

follow up tests are not sufficient to prove that a patient has HIV, since they themselves may register false positives by falling prey to the same misreadings as the standard ELISA test (Papadopoulos-Eleopoulos 1993). A false positive is verified by another false positive. Orthodox scientists respond by arguing that the likelihood of two separate false positives is miniscule. But the dissenters make the answer that one uncertain test cannot be used to justify another. Since neither is certain, then one cannot support the other. Called into question is not only the certainty of all HIV tests, but also projections of infection rates based on the societal distribution of those positive readings.

This problem is exacerbated in South Africa. Only the cheaper ELISA tests are usually administered. Field diagnoses of AIDS are often made after noting the presence of the diseases to which the weakened immune systems falls prey, such as pneumonia (Johnson 2001). Dissenters maintain that until causality is established, the presence of opportunistic infections cannot themselves lead to a diagnosis of AIDS. ELISA tests in that country likewise should be mistrusted, both because they are unreliable and because the Western protocol of a follow-up test is not followed.

These basic scientific arguments constitute the core of the dissenters' position on AIDS. Every single one has been ruled out by the vast majority of scientists, the infected, the public, and policymakers. The questions of how certain we are about the HIV theory and the benefits of prescribing ARV drugs have deemed irrelevant and substituted with a deep societal commitment to fighting the disease. The following section describes how this state of affairs came to be.

3.2 AIDS DISSENT GOES PUBLIC

Perhaps more than any other scientific controversy in recent memory, the AIDS debate in the United States was one where public arguments mattered. Sociologist of science Steven Epstein (1996) notes that the public debates over AIDS policies and science at the beginning of the epidemic require scholarly attention to the role of strategic decision making. He notes “the need for new approaches to the study of the politics of knowledge-making in scientific controversies with overtly public dimensions. Analysts of science and medicine should speak to the strategies employed by lay actors in their attempts to speak credibly about science and medicine—how they frame arguments, how they disseminate scientific information, how they build their own expertise, and how they enlist supporters behind them” (332). Epstein here writes about the intervention into AIDS policy debates by lay activists in the 1980s. This same attention to the crafting and dissemination of scientific arguments also affected the development of AIDS dissent in South Africa, as we have already seen in chapter two. But the AIDS dissent that Mbeki developed was the end product of a long process of transformation by many different actors. This section will now examine that transformation. We will begin at the point where the AIDS orthodoxy finally coalesced in the United States.

By 1986, “the proposition ‘HIV causes AIDS’ was hegemonic in US science and society” (Epstein 1996). Even though direct causal evidence remained sketchy, leading scientific voices were already advocating public policy based on the HIV theory. The National Academy wrote that “although this knowledge is incomplete, it is extensive enough to permit projections of a likely 10-fold increase in AIDS cases over the next five years, to provide a basis for planning the provision of health care, to guide policy decisions on public health, and to envisage strategies for drug and vaccine development” (Institute of Medicine 1986, 5). Even though scientists did not

know exactly how HIV caused AIDS, they were convinced that it did and felt warranted in advocating public policy based on that assumption. Even if the scientific evidence was not as factually strong as that for other diseases, Epstein notes that the HIV theory was by this time a *social* fact, one that “quite simply restructured the world, altering the views of what millions of people did and said” (93). Government attitudes toward public health were radically altered. In response, new protocols for drug trials, needle exchange programs, and massive research funding all materialized. The changes were even more pronounced at the personal level, as hundreds of millions of people throughout the world altered their sexual practices after AIDS.

But it was in the gay community that the changes were most pronounced. There, the seeds for the popularization of dissent were sown. Epstein’s description of the tumult foreshadows Thabo Mbeki’s cultural defense of dissent fifteen years later. “Gay men were wracked with frustration by the slow rate of progress in the development of treatments for AIDS, and those testing positive for HIV antibodies were increasingly pessimistic about their likelihood of avoiding illness and eventual death” (117). Faced with what seemed a death sentence and a government that was too bigoted to listen, these men were primed for heresy against the scientific orthodoxy. Infected men began to entertain the arguments of dissenters. In chapter two, we saw how the hostility Mbeki perceived from orthodox scientists and drug companies to his attempts to fight AIDS contributed to his dissent. Both groups were more likely to respond positively to challenges to the orthodoxy than others might have been.

Peter Duesberg in particular was a hero of the early public dissenters. His scientific credentials were enough to guarantee a hearing for his views in a way that lay people could not generate. But even then, it took outside social movement pressure to get Duesberg’s arguments considered by the establishment. Gay and alternative press outlets in the United States began to

report on Duesberg. From there, occasional mainstream press attention would be paid to his positions. For instance, Science published a brief “policy forum” exchange in the summer of 1988 about the etiology of AIDS. Duesberg summarizes his position that HIV does not cause AIDS “because it fails to meet the postulates of Koch and Henle, as well as six cardinal rules of virology” (Duesberg 1988, 514). Duesberg was advocating a purist approach to the science, where the strict standards of causality should not be abandoned, even in the face of an epidemic.

Once the public began to notice the dissenters, Epstein points out that orthodox scientists were caught in a dilemma. They could ignore Duesberg and run the risk that his charges went unanswered. Or, they could engage him and risk legitimizing his views. The first strategy may have been appealing, “yet to many scientists, the political costs of ignoring Duesberg increasingly seemed to overshadow the risks inherent in engaging with him” (119). In 1994, the popular scientific press decided to give its most systematic assessment of Duesberg’s claims.

3.3 THE DUESBERG PHENOMENON

Jon Cohen, a reporter for the journal Science devoted a slate of four articles to a consideration of what he called the “Duesberg Phenomenon” (Cohen 1994a, 1994b, 1994c, 1994d). The articles brought together several of the main arguments of AIDS dissenters with responses from many orthodox scientists. One difference from scientific papers or alternative press accounts that is notable in this series was the role played by Cohen himself. Cohen not only reports, but also arranges and evaluates the arguments. While extensive quotes from Duesberg and his critics are used, the positions are nevertheless arranged by Cohen and then commented upon. Cohen often acts as an argument critic, rendering judgment on the points when he finds one side to be

reasoning poorly. While the arguments are designed for consumption by a science literate public, they stick to the technical issues and avoid moral or cultural issues.

Duesberg consistently reiterates his early arguments that sufficient evidence has not been found to demonstrate etiological claims between HIV and AIDS. Significant time is devoted to AIDS among hemophiliacs. Both sides contend that these individuals may be the best test cases because long-term studies are conducted on them all the time. They also do not take narcotics at near the rate of other at-risk groups, thereby controlling for Duesberg's claims on the toxicology thesis. Duesberg makes the claim that a number of studies show that high doses of "factor VIII," an anti-hemophilia drug, may correlate with AIDS infection. "Pediatrician Donald Kaufman of Michigan State University, who co-authored the study in question, says Duesberg's interpretation of their data is 'erroneous'" (1645). In this format, Cohen is able to correct misrepresentations and judge whether arguments stand up to scrutiny in a way that a purely monological defense of AIDS dissent, like a speech or article, would not allow.

Likewise, on the issue of Koch's Postulates, Duesberg makes an appeal to insufficient evidence. He finds wanting claims that the accidental injection of several lab workers with infected blood and their subsequent contraction of AIDS is proof enough of isolation. "Rather than accept the lab worker data as definitive," Duesberg calls for a study that "would compare two large groups of people matched for age, lifestyle, and 'non-drug use' who differ only in HIV status" (1647). But Cohen quotes orthodox scientists who contest the need for such evidence. "Others contend that this study isn't necessary. 'As far as I'm concerned, the laboratory workers prove causation,' says Anthony Fauci, head of the National Institute of Allergy and Infectious Diseases. 'I don't need any more than that'" (1647). The rhetorical power of Cohen's format is evident in this section. Arguments from either side can be followed up and rebutted. In his

Proceedings of the National Academy writings, Duesberg did not have to contend with another scientist contradicting his viewpoints. The mediation of the popular press format makes his dissent far less convincing.

On epidemiology, Duesberg points to the lack of AIDS cases in Thailand to question the link between HIV and AIDS. But Cohen is able to cite subsequent data that show how cases have been exploding in that country. Duesberg's arguments based on lack of evidence are trumped by newer studies that he is unwilling or unable to acknowledge. Finally, the Science piece pushes the issue of Duesberg's drug hypothesis. On every point, Duesberg's claims are brought to scrutiny by orthodox scientists, who consistently find them lacking, incomplete, or disingenuous.

In this adversarial format, the burden of proof is shifted. Duesberg's strategy of casting doubt on orthodox claims by calling for further data is turned against his own affirmative position. AIDS dissent started as a question of whether the orthodox case had met some abstract standard for theory adoption. Are we certain enough to believe that HIV causes AIDS? But in the Science exchange, dissent now had to defend itself as more offering a more plausible alternative than the orthodoxy. With the burden of proof shifted, Duesberg's narcotic hypothesis looked much weaker. Cohen's articles show how engaging the arguments in a public way can focus the debate on the pivotal philosophical and methodological issues at play. New evidence can be introduced against certain claims. Misrepresentations can be exposed and corrected. Issues of criteria and evidence evaluation can be engaged directly. Purely defensive positions can be asked to provide positive alternatives which then can be evaluated against the orthodoxy. The decision to engage Duesberg was a success, as his arguments appeared far weaker when rebutted than when ignored.

Such techniques against dissenters became more common after the Cohen series in Science. For example, the editors of Gene Therapy Weekly who once had thought that Duesberg was “a refreshing wake-up call” were claiming in 1995 that further debate on the issue was irrelevant (DeNoon 1995). One need not ignore or censor AIDS dissent; new evidence and arguments were simply making the issue obsolete. However, Epstein notes that even these new levels of scientific evidence were still short of traditional virological proofs. Knowledge of AIDS was deeper, but still fell short of meeting Koch’s Postulates. But when measured against the toxicological alternative provided by dissenters, shortcomings in the certainty of the orthodox position became less and less problematic. As far as practicing scientists were concerned, the utility of questioning the orthodoxy faded when no compelling reasons to junk the HIV hypothesis emerged. AIDS dissent simply did not offer anything worth debating anymore. As a result, the influence of Duesberg faded rapidly. Even the infected who had briefly championed the cause were relegated to fringe minority status. By the mid 1990s, the battle appeared to have been won.

Dissent, though, did not die once these new studies were available. It smoldered in the hearts of a dedicated few. Rather than relying on credentialed scientists to defend their position in scholarly journals or the major press, dissenting activists took the cause to the streets. They adapted the highly technical arguments of Duesberg for public forums. While they could no longer get their message out in Science, they could always rent out a lecture hall or speak at local meetings of the infected. This popularization of AIDS dissent served the purpose of infusing the moral and ethical elements of dissent that Mbeki found so persuasive. One of the primary catalysts for this popularization was Christine Maggiore.

3.4 CHRISTINE MAGGIORE

Maggiore, a former garment executive with no scientific training, was diagnosed with AIDS in 1992. After what she describes (Maggiore 2005) as several inconclusive follow up tests at the hand of an impersonal medical establishment, Maggiore turned to personal research, as the newly diagnosed often do to better understand their disease. It was during that search that she encountered the arguments of AIDS dissenters. In 1995, she founded “Alive and Well AIDS Alternatives,” a non-profit group that advocates for “the right to make your own informed decisions regarding HIV and AIDS.” The organization hosts public events and conducts media appearances.

And Maggiore herself is something of a rock star among lay dissenting activists. “The singer Nina Hagen wrote a song for her, and Esai Morales, the actor, is a big funder. The platinum-selling alternative rock band Foo Fighters promotes Maggiore’s ideas on its Web site. And in South Africa, Maggiore met privately with South African President Thabo Mbeki, who endorses many of her beliefs” (France 2000). She continues to do speaking engagements across the country. Despite her lack of scientific training, Maggiore has developed into one of the leading popular voices of AIDS dissent.

The dissent of Maggiore and that of Mbeki overlaps in several important ways. Both ask for more certain scientific evidence before they are willing to endorse a causal connection between HIV and AIDS. Both combine technical arguments borrowed from credentialed AIDS scientists and couple them with political arguments that emanate from their own position, that of HIV patient and victim of apartheid respectively. The two also agree that ARV drug treatments should not be administered until such time as their standards of certainty have been met. Even

though the two only met briefly, before the Durban AIDS conference of 2000, they are in substantial agreement on many issues. They do, of course, differ in some respects as well. Maggiore, as we shall see, speaks out far more often about discrimination against the HIV positive than does Mbeki. She is also a much more enthusiastic spokesperson for dissent, frequently speaking out on the issue, writing books, and setting up websites advocating for dissent. Mbeki, on the other hand, rarely discusses the issue publicly, and often then only to justify his public policies. Further points of congruence and divergence between the two will be more apparent as we closely examine one of Maggiore's most important articulations of AIDS dissent.

Christine Maggiore's book What if Everything You Thought You Knew About AIDS Was Wrong? (Maggiore 2000) is a paradigmatic example of how the technical arguments of AIDS dissenting scientists are translated into public rhetoric by lay activists. Indeed, much of the material is a translation of the scientific writings of the likes of Duesberg and Eliopoulos-Papadopoulos. But writing for a general public audience permits her to use political arguments that would have been deemed inappropriate from credentialed scientists in technical forums.

Maggiore speaks directly to lay people, themselves with little or no scientific training. It is very likely that much of her audience is people newly diagnosed with AIDS, doing independent research as she did. Maggiore takes great pains to use her own diagnosis as a means to identify with them. She is adamant that dissenters care about the infected and that they understand the audience's fear and trepidation. She too sought out information about AIDS after her diagnosis. What she found was that powerful interests were defending sloppy science at the expense of the infected. She plays upon the fears of stigmatization in her audience by citing examples where the government has been overzealous in its persecution of HIV sufferers.

Mandatory drug treatments, baby seizing, and the foibles of pre-natal genetic counseling are all linked by Maggiore to orthodox AIDS science. Maggiore's connection of the prejudice against AIDS sufferers with AIDS scientists adds emotional resonance to her arguments and primes her audience to be mistrustful of the orthodoxy.

In her scientific arguments, Maggiore recreates the methodological and epistemological debates between orthodox and dissenting scientists discussed earlier. The general approach is not to claim that AIDS science is wrong, but rather to contend that the HIV theory is insufficiently proven to legitimate the use of ARV drugs. To make this point, Maggiore often discusses the way that claims to scientific knowledge ought to be evaluated. For example, she makes a distinction between a theory and a hypothesis, the latter defined as "an unproven assumption tentatively accepted as a basis for further investigation and argument Any new hypothesis must stand up to the scrutiny of peer review and must be verified by successful experiments before it can be considered a reasonable theory" (4). She maintains that the initial announcement of HIV as the cause of AIDS "violated a fundamental rule of the scientific process" (4). Because Gallo went to the media before publishing in a peer reviewed journal, "the media . . . reported his idea as if it were established fact, inciting government officials to launch new public health policies based on the unsubstantiated notion of an AIDS virus. Some attribute these violations of the scientific process to the atmosphere of terror and desperation that surround the notion of an infectious epidemic" (4-5). The political nature of the popular consensus around the HIV theory is a common theme for Maggiore. A famous example of how politics influenced our understanding of HIV and AIDS is the spat between Montagnier and Gallo over the initial discovery of HIV (Reeves 1998). Maggiore uses that issue to imply that objective scientific

protocols were violated during the discovery of AIDS, and therefore that the theory itself ought to be questioned (5).

Maggiore also questions the motives of AIDS scientists whom she implies are opposed to the best interests of the patient. She points out what she sees as the role of profit and prestige in silencing dissent. “Why are we not getting all the facts about HIV and AIDS? Why do media reports uncritically promote HIV testing and the notion that everyone is at risk for AIDS?” (41). The answer lies in a complicated intersection of money and pride. Scientists receive grants to study AIDS. The media will not investigate the issue for fear of offending the HIV positive. AIDS activists believe that “critical examination of HIV and AIDS is equivalent to promoting unsafe sex and may cause HIV positives to stop or refuse necessary medical treatment” (41). And pharmaceutical companies disburse lucrative grants and contracts to AIDS scientists to guarantee complicity in the conspiracy. The link between HIV and AIDS made retrovirology an important science that qualified for all of those grants and for public acclaim. The theory must be defended even if it is false to retain that prestige and those dollars.

As a result, the claims of orthodox AIDS scientists should be closely scrutinized. The burden of proof is shifted onto the current orthodoxy. Even if it is the dominant paradigm, Maggiore demands that adherents to the HIV theory answer her questions in order to be considered legitimate. Often, her questions do not arise from new evidence or studies. Rather, some perceived lack of satisfactory evidential support for some element within the status quo position is itself grounds for doubt. She implies that any unanswered question about AIDS is sufficient warrant to require examination of the entire theory. Just as Mbeki would argue a few years later, while that examination is taking place no actions based on the assumption that HIV causes AIDS should be taken.

To prove that the public consensus surrounding AIDS might be wrong, Maggiore points to knowledge claims made early in the development of AIDS science that were later overturned. For example, she notes that early statistical projections of death and infection rates were later shown to be inflated or inaccurate. This justifies a suspicious attitude toward any current and future scientific claims about AIDS. Maggiore cites claims by the CDC in 1986 that 1 to 1.5 million Americans were HIV positive. That number was revised down to 650,000 to 900,000 in 1995. Such discrepancies, in her view, erode the presumption that any other statistic about AIDS is true. She even historicizes the fallibility of public health science throughout the past several centuries to cast doubt on contemporary epidemiology. “Throughout history, the medical and scientific communities have been in near unanimous agreement on causes and treatments for diseases that later turned out to be absolutely wrong” (47). In support, Maggiore cites the mistaken early belief that bacteria caused the 1918 influenza outbreak (it was a virus) or that scurvy in the 19th century was caused by a microbe (it was Vitamin C deficiency) (47). Not just contemporary AIDS science, but all public health science has the potential to be wrong. And once scientists prove fallible, they lose their credibility and must then justify each of their claims much more fully.

A parallel strategy of Maggiore’s is the use of anecdotal and analogical evidence in asking these questions. While her threshold for evidence necessary to elevate a hypothesis into the realm of theory is high, speculation and analogy is enough to doubt a claim. As a result, Maggiore’s book contains over thirty pages of personal testimonies, including her own, of HIV positive people who never developed full blown AIDS and live healthily while not taking ARV drugs (94-126). Access to this type of evidence is a one-way street for Maggiore. She will not admit anecdotal evidence from those who claim that ARV drugs saved their lives. As the skeptic

casting reasonable doubt on the orthodoxy, she is able to speculate about and imply possible flaws in AIDS science. But her opponents must use high levels of scientific evidence to rebut her charges.

The strategy of poking holes in an argument is open when one seeks only to negate. Maggiore may chip away at the entire theory, picking points where its proof is weakest, and then uses doubt in those points to indict the whole theory. With no burden to build an alternative theory, Maggiore can be selective. And in her monological book, there is no advocate on the other side pushing her on these issues. Duesberg was on the shakiest ground in Science when his alternative theory of the etiology of AIDS was considered. When placed in comparison to HIV, his narcotics theory of etiology was clearly inferior in the eyes of his colleagues. What If Everything You Knew About AIDS Was Wrong? needs only to speculate about alternative causalities, and takes on no affirmative burden of proof. As a result, it avoids the problems that Duesberg encountered.

Maggiore's book is a public application of a set of assumptions about the evaluation of claims to scientific knowledge. These views are quite different from those of orthodox scientists. And just as a set of contextual assumptions under girds Maggiore's philosophy of science, so too has context helped shape the views of the orthodoxy. In the following section, we will consider the development of the orthodox views on how to assess AIDS policy arguments. Following that, we will examine a case where these two opposing scientific philosophies came into direct contact through public argument.

3.5 THE CULTURE OF AN EPIDEMIC

Orthodox AIDS scientists carry the lessons of the initial outbreak with them. Indeed, one of the most consistent elements of the literature that has examined the development of AIDS policy in the United States during the 1980s has been attention to how conservatism and indifference were replaced by powerful biases toward action and unanimity in the face of the crisis. References to AIDS as an epidemic akin to cholera, typhoid, and the Black Death are all commonplace, almost universal. Philip Strong (Strong 1990) describes an “epidemic psychology,” a theory of how societies respond to an outbreak. The concept is “the best known product of Strong’s HIV/AIDS research” (Bloor 1996) and directly relates to the establishment of orthodox AIDS culture during the outbreak. His concept is a sociological attempt to account for the public reactions to AIDS. The first response is an epidemic of fear after the infection. That is followed by an epidemic of explanation and moralization where blame for the outbreak is assessed. Finally “an epidemic of action, or proposed action” (251) emerges, where combating the disease becomes the unifying desire of the infected community.

Especially early on in an epidemic, all manner of theories about the disease are common. “One striking feature of the early days of such epidemics seems to be an exceptionally volatile intellectual state. People may be unable to decide whether a new disease or a new outbreak is trivial or whether it is really something enormously important” (254). The first reports of deaths of gay men in the United States initiated such a debate. Some found the deaths coincidental, and others found it to be an interconnected outbreak of some new disease. But once one is convinced

that an epidemic has begun, proving that to others can be an almost religious pursuit. Strong argues that in all epidemics, and with AIDS in particular, people “became messianic—from then on, they rushed out and tried to warn, educate and convert other people” (254). Once personal doubt over the existence of an epidemic is overcome, a desire takes over to fix the problem by any means necessary. At the same time, the new converts attempt to isolate potential human causes of the epidemic, in neglect or malice, in the hopes of learning lessons for the future. Whether the blame lies at the feet of petty and greedy scientists, indifferent and bigoted politicians, or the patients themselves who have incurred the wrath of God for their deviance, assessments of why an outbreak went unchecked were made. Once the epidemic of action arrives, then political considerations and finger pointing fade into the background. Public health becomes the most important thing. In a further exploration of how societies react to deadly outbreaks (Strong 1998), Strong put it like this:

For an epidemic of this kind is an infectious disease so immediate, so visible, so patently fateful, at least potentially, for large numbers within the affected human society that, though there is sometimes a period of denial at its onset (when its effects are too little known about to take seriously, or too economically and socially devastating to be acted upon unless there is overwhelming evidence of its presence), there comes a time when the potential implications of the biological process can no longer be denied . . . [As a result] far from being ignored, the disease and its progress now becomes the object of urgent, increasingly systematic observation and action, of a potentially gigantic mobilisation and reorientation (245).

A review of the literature evaluating the development of American AIDS policy quickly confirms Strong’s reading. According to Sandra Panem (Panem 1988), the prevailing lesson

from the various Presidential commissions, Congressional committees, and other reviews of the AIDS outbreak in the United States was that centralization of authority, massive and flexible funding, and consistent public health communication were the key. Such a system was necessary to ensure quick action and to overcome indifference in the government. Epidemics are not a time for debate. Responding to any public health emergency requires that we focus power in the hands of a few and give them great latitude to protect the public interest.

This focus on timeliness of action is often cited as being particularly important in fighting an epidemic (Erni 1994). While arguing that “a distinguishing characteristic of epidemics is that they generate a sharp sense of crisis and an immediate demand for decisive and visible national and community action” (145), Yole G. Sills (Sills 1994) remarks that “the most common criticism [of US policy] has been that the national response to AIDS was tardy, that the Reagan administration and its agencies responsible for public health and for biomedical research were slow to recognize the implications of the onset of AIDS” (155). Even if scientists could be convinced that their own research could continue while the government debated, only policymakers can make broad improvements to public health and authorize the distribution of drugs (Clark 1994). Without the government acting swiftly, the epidemic spreads. A central theme of Western AIDS policy after the American outbreak was that aggressive governmental action is the only appropriate response to the disease. The World Bank warns (World 1997):

We can also learn from the policy mistakes of the past. No country, rich or poor, is insulated from the risk of HIV. Governments should intervene as soon as possible; if policymakers wait until AIDS is killing many people, HIV already will have spread widely, interventions will be less cost effective, reducing infection will become more

difficult and, absent a cure, the epidemic and its terrible impact are likely to persist for decades (284).

Along with timeliness, a major concern is the danger of politicizing a disease in the midst of a public health crisis. Kenneth J. Doka (Doka 1997) argues that AIDS is particularly prone to politicization, since it has been used by conservatives to attack gays. On the other hand, arguments from gay leaders about protecting civil liberties delayed the closing of San Francisco's infamous bathhouses, believed to be primary grounds for the spread of the disease (see Robinson 2005). Doka writes that "the demands of public health become caught in, and subordinate to, an elaborate political game" (115). The most important thing is saving lives, and the prejudices or political concerns of groups on either side of the epidemic must be bracketed in favor of immediate and decisive action.

This act first mentality has also become hegemonic in the popular understanding of how to react to an epidemic. No text has been more influential in the formation of popular attitudes toward the history of AIDS policy than Randy Shilts's And the Band Played On (Shilts 1987). In that book, later made into a critically acclaimed and popular movie, he offers an account of the early history of AIDS policy in the United States that echoes all of the tenets of the epidemic psychology. In his preface, Shilts notes how prejudice and the lack of leadership worked against immediate action.

People died while Reagan administration officials ignored pleas from government scientists and did not allocate adequate funding for AIDS research until the epidemic had already spread throughout the country. People died while scientists did not at first devote appropriate attention to the epidemic because they perceived little prestige to be gained in studying a homosexual affliction . . . People died while public health authorities and the

political leaders who guided them refused to take the tough measures necessary to curb the epidemic's spread, opting for political expediency over the public health . . . And people died while gay community leaders played politics with the disease, putting political dogma ahead of the preservation of human life (xxii).

In this view, AIDS debates are never abstract epistemological disagreements; the human consequences are too high to permit anything but immediate action. Large segments of society, Shilts seems to be saying, were complicit in the deaths of thousands since they had the power to act and yet chose to put other considerations ahead of public health. "The bitter truth was that AIDS did not just happen to America—it was allowed to happen by an array of institutions, all of which failed to perform their appropriate tasks to safeguard the public health. This failure leaves a legacy of unnecessary suffering that will haunt the Western world for decades to come" (xxii). Failure to act, for whatever reason, is literally evil.

The heroes in And the Band Played On are the handful of scientists who dared to stand up to the system. It is important to note that what made these advocates heroic was that they resisted continued calls by policy makers for more and better evidence before changes were made as too slow and bureaucratic. These are the same evidentiary demands that dissidents, and President Mbeki, would later apply to AIDS in South Africa. But the American experience had already found those standards to be contrary to the public good. As a paradigmatic example, consider Shilts's rendering of an encounter between director of AIDS research at the Center for Disease Control Don Francis and the heads of the nation's leading blood banks on whether or not costly blood screening measures should be adopted.

As far as Francis was concerned, the assembled leaders of the blood banking industry were about to take a course of action that could, at best, be termed negligent homicide,

although Francis was known to drop the word ‘negligent’ in private discussions on the issue. The blood banks refused to believe that transfusion-associated AIDS existed, and now we’re going to kill people because of it, Francis thought. It was that simple (220).

Shilts notes that after questioning whether or not the numbers of blood transfusion cases were high enough to warrant costly action, “Assistant CDC director Jeffery Koplan was taken aback. “To bury our heads in the sand and say ‘Let’s wait for more cases’ is not an adequate public health measure” (221).

In the United States, the scars of AIDS policy in the 1980s run deep. The inevitable assignment of blame after the outbreak fell on all who had hesitated to act. It was indecisiveness and indifference that rung the death toll for the sufferers of AIDS. What emerged from that experience was an understanding that action took precedence over all other considerations. This epidemic psychology is directly mirrored in the consternation over Mbeki’s comments some fifteen years later. He was ignoring the lessons of Reagan and was content to debate in a public health crisis, wishing to put the political considerations of a post-apartheid African identity before taking action, and questioning the link between HIV and AIDS just as many government scientists had done in the early moments of the AIDS epidemic in the United States.

The two views on evaluating AIDS science in this dispute are now clear. The dissenters such as Maggiore and Mbeki saw the political motives of the orthodoxy as warranting high standards of proof before acting based on the HIV theory. The orthodox scientists found the material consequences of delaying action too high. Choosing one evaluative framework over the other will significantly determine which arguments are persuasive.

For the most part, these two sides avoided direct contact throughout this migration from technical to more public forums. The rise of advocates, like Maggiore, who lacked scientific

credentials made it even easier for the orthodoxy to ignore the dissenter's viewpoints. And, as a result, AIDS dissent enjoyed the luxury of rarely having to defend itself against direct challenges. Bringing Duesberg out of the monological journal article into the pages of Science altered the way the arguments developed. So too would bringing Maggiore or other lay dissenters into conversation with orthodox scientists directly alter their arguments. Such exchanges are of particular interest to observers of rhetoric. Using transcripts of direct, debate-style engagements between differing sides in a scientific controversy highlights points of congruence and divergence that otherwise might not come to light (Mitchell 2000). One such transcript does exist: a public debate between Christine Maggiore and AIDS scientist Brian Foley, focused directly on the issue of the certainty of the HIV theory. That exchange will be our final example revealing how the arguments of dissenters are affected when challenged directly by the orthodoxy.

3.6 THE SCIENCE POLICY FORUM DEBATE

The William Pitt Debating Union's (WPDU) 2001 public debate on AIDS science (Foley 2001) was a unique moment in the relationship between the two sides. Here, unlike the mediated exchange found in Science, the advocates interacted directly with each other and responded to questions. Intended for a lay audience, the more political elements of AIDS dissent that Maggiore highlighted in her book come to the fore. Freed from editorial constraints to stick to technical issues, the debaters brought in political arguments, analogical and common sense reasoning, and other techniques designed to sway the audience.

But when assessing this debate, one of the factors that must be considered first is the debating acumen of the advocates involved. Dr. Brian Foley, who represented the orthodox position in the forum, is not a professional speaker or advocate. While an expert in AIDS science in his capacity at the Los Alamos National Laboratory, he had no special training in debating or public presentation techniques. Maggiore, on the other hand, is not only a seasoned speaker, but has refined her dissenting arguments over years of public appearances. Purely at the level of debate performance, Foley is no match for Maggiore. My personal view is that, judged as a debate and distinct from the truth of the arguments presented, Maggiore was the clear victor. Someone who had no prior knowledge of the controversy and watched the debate, in my opinion, would find Maggiore's performance more compelling. Her superior advocacy skills, her organization that was narrowly focused on the proposition, and Foley's inability to answer her arguments until the very end are all factors that tip the scales to Maggiore.

But the purpose of the present examination is not to determine winners and losers. This is not a debate ballot; instead, the following remarks will be descriptive. Here we will analyze what happens to the arguments on either side once they come into confrontation with each other. Even though he "lost" the debate, I will maintain that Foley discovered several strategies near the end of this performance that illuminated the issues at the core of the controversy. Over the course of the debate, differences between the two sides emerged that must be resolved in the minds of the audience before they make their decision as to which argument is stronger.

The forum was explicitly designed to address the issues of AIDS etiology in a cool and dispassionate manner. Moderator Laura Hutchings notes the impetus behind the forum was a heated exchange between Maggiore and callers onto a legal affairs television program. The program soon became "very hostile to Christine's [Maggiore] views . . . some of the callers were

so emboldened that they resorted to shouting” (10). Rather than recreate a hostile environment, the topic for this debate, “The HIV-AIDS Connection: How Certain Are We?” was purposefully written to be open-ended. This was supposed to facilitate finding common ground. “We have left room for both of the advocates to define their own space by framing the topic as a question that requires more than a simple yes-or-no answer” (12). And indeed, the transcript reveals that the tone was surprisingly civil given the emotional resonance of the topic.

Foley spoke first, and attempted to anticipate the arguments from uncertainty that Maggiore would deploy in her subsequent remarks. He rejected the characterization that orthodox scientists believe monolithically that “HIV=death.” “Although I [Foley] completely agree that HIV does not equal AIDS does not equal death. This is an overstatement or a misstatement of the case” (20). Foley instead echoed our earlier discussion of epidemiology by noting that public health science deals with probabilities. Causal claims about a disease like AIDS can never be totally certain, even if orthodox scientists have not always made that point clear. “So I [Foley] would like to present some data on how we know HIV causes AIDS, but also go into places where the party line may not have gone before about why, even knowing that AIDS is caused by HIV, that does not necessarily apply to all individuals with HIV, or diagnosed or misdiagnosed as being infected” (14). This tactic directly addressed Maggiore’s claims about scientific reasoning. Unfortunately for him, Foley’s elucidation of this position rambled and frequently brought in material not related to AIDS etiology. After a lengthy digression, Foley summed up the case for etiology. “I think I’ll roughly stop there, and basically state this: We know that HIV does cause AIDS. We know a lot about the virus, including the molecular structure of most of the proteins encoded by the viral genome. We know where the anti-retroviral drugs act. We know what mutations in the virus cause it to break through and become

resistant to the drugs” (21-22). Foley’s claims to knowledge granted that we do not know everything about AIDS. Some things about the disease are still a mystery. And yet, he maintained that we know enough about HIV and AIDS to act on that theory.

In the question and answer period following his speech, the issue of causation was put directly by Briana Mezuk. Echoing Duesberg’s arguments, Mezuk asks “I was wondering how the scientific community differentiates between correlational and causal relationships. How is the jump made from, ‘Many people who have Kaposi’s Sarcoma are also HIV-positive,’ to ‘HIV causes immunosuppression, which leads to Kaposi’s Sarcoma, in people who are HIV positive’” (24-25). Foley responds: “You know, if this virus infected skin or something, you would not directly correlate between the immune system and the virus. But when this virus is found to infect immune-system cells and cause an immune deficiency, it’s pretty clear that there’s more than just correlation there” (25). Even though we cannot prove the link between HIV and AIDS to unimpeachable standards, all of the circumstantial evidence points to it. It makes no sense for HIV not to be involved in the immune system. And in the absence of a reason not to subscribe to the HIV theory, absent a more plausible alternative, we are licensed to do so. It is a softer standard of causation than Duesberg or Maggiore would endorse. But the argument begins to address the substance of the dissenter’s objections to AIDS science, and was drawn out by a direct question in this debate format.

Maggiore’s opening statement, by contrast, was a cogent articulation of the types of arguments found in her book. She began with an appeal to open discourse and scientific discovery, establishing the “we are only asking questions” stance from What if Everything You Thought You Knew About AIDS Was Wrong? that lowered her own burden of proof. She discussed her decision to become an activist after she was diagnosed as HIV positive. “I started

an AIDS organization on my own that would be a debate sponsor . . . I was interested in open dialogue on this subject” (29). She was once again establishing her credentials as a patient and as a lover of open dialogue. She then moved on to make the claim that AIDS science is too speculative to trust.

So, to get back to the title of today’s debate “The HIV-AIDS Connection: How Certain Are We?” I do not think that we are certain enough. I don’t think we are certain enough to issue immutable death sentences, like I was given. I don’t think we are certain enough to promote toxic, experimental, immune-compromising drugs as “necessary,” “life-saving” treatments. I don’t think we are certain enough to deny expectant mothers the right to make informed decisions about testing and treatment. I don’t think we are certain enough to take away the children of HIV-positive parents who are choosing alternative paths to health. And I don’t think we are certain enough to limit all scientific discourse, research and funding on the assumption that HIV is the single and absolute cause of AIDS (30).

The argument is both epistemological and normative. Causality is a matter both of having enough evidence and of considering the material consequences of acting on those knowledge claims. We are warranted to claim causality once we know that the positive or negative consequences of acting on those knowledge claims are worth it. The scientific claims are unavoidably wrapped up with the political entailments of believing and acting upon them.

One of the important ways that she argued that the consequences of anti-retroviral therapies are not worth their use is to analyze the early coalescence around retroviruses as the cause of AIDS. “Science begins with observation, you know. Without observation, you cannot go forward. I have a science text here with me: ‘Observation plays a fundamental role in science

. . .Do not confuse observations with *assumptions*. An assumption is a conclusion based on indications, logical reasoning or observer bias, and not on direct proof” (32). AIDS scientists failed to observe. They let their prejudicial assumptions in favor of HIV as the cause of AIDS get in the way of proper inquiry. According to her reasoning, the failure to explore all possible reasons that a group of gay men would be contracting the same disease beyond their sexual practices was scientifically slipshod. “So to jump to that conclusion was premature and unfounded, and *no* other hypotheses, no other ideas, were tested. Toxicologists were not brought in. Nutritionists were not brought in. Practitioners of integrative medicine were not brought in to try to figure out what was going on with this situation” (33). The argument is reminiscent of a defense attorney criticizing the police for jumping to the conclusion that her client was the criminal when it could have been the Mafia or Russian drug lords, an inside job, or any other possibility. Foley had already noted that pursuing all possible etiological elements is unwarranted. Something is suppressing the immune systems of these patients, and diet is far less likely to be the cause for these mysterious deaths than retroviruses. But Maggiore demanded this exhaustive search for all possible alternative causalities.

While he did not directly address the crucial issue of what constitutes a defensible standard of proof for AIDS science at the beginning of the debate, Foley began to see the light in his next two speeches. In his closing argument, he attacked the dissenters’ base assumption that AIDS science is more speculative than other sciences. Responding to Maggiore’s challenges, he observed “I guess the major difference here is whether you look at AIDS as a public health problem or if you look at AIDS as a personal, individual affliction . . . For public health, we need to keep track of statistics. We have to put people into categories . . . If we just sort of wave our arms and say ‘Well, a lot of people take drugs. Maybe it’s drugs,’ we don’t get anywhere in

pinpointing where the problem lies” (45-46). Public health science is allowed to generalize, to infer, to pursue probable reasoning alone. And the pragmatic necessity of tackling AIDS cannot be held hostage to abstract theories of causality. Maggiore holds AIDS science to a standard that it, or any other public health issue, could never possibly meet.

Foley made a helpful analogy to a contemporaneous news story, the recall of Firestone Tires. “Of course there were co-factors involved in that. The car had to be moving, it had to be on a sport utility vehicle . . . But did everybody driving a sport utility with a Firestone tire die? No. Did everyone roll over? No . . . You know, it’s a *percentage* of them had that problem” (45-46). Yet, the recall was still executed. Even if there is some possibility that AIDS is caused by something other than HIV, there is plenty in Foley’s mind to warrant action now based on the theory. At the same time, Foley rejected the charge that orthodox scientists automatically associate HIV with death. While Maggiore painted the picture of AIDS science as believing that HIV automatically equals death, Foley rejected the straw person characterization by occupying an argumentative middle ground. “The truth lies in between the two extremes. One person tells you the drug is a cure; the other person tells you the drug is the cause. Neither one of those is the truth” (48). Maggiore is able to saddle the orthodoxy with her “HIV=AIDS=Death” attack in her books. But the debate format allows Foley to take ownership of his own advocacy and rebut that charge.

During the question and answer period, an audience member who apparently sympathizes with the dissenting viewpoint asked about policy implementation. After admonishing the Food and Drug Administration for ties with pharmaceutical companies and citing the toxicity of AZT, the unidentified audience member asked, “Given that we’re not even sure whom we can trust in terms of who’s giving us biased information and who has an agenda, can you please give me any

real reason why, as a parent, I should listen to the state and not my own mind and heart?” (68). Maggiore answered the question with a series of examples highlighting government abuses and discrimination against the HIV positive. The questioner indeed should not trust the government, for it has a demonstrated antipathy to the HIV positive. Foley, perhaps a bit bluntly, embodied the epidemic psychology by saying that public health must come first. “Our public health policies in some cases *have* to go against what’s best for individuals . . . I agree with Christine that some of these cases are terrible. AIDS is terrible” (71). Foley wanted to avoid injustice. But during an epidemic, public health comes first. The question is not whether the government should act, but how aggressively. Foley referred to two extremes: Cuba, where AIDS patients are locked up, and the indifference of the United States during the initial outbreak. Somewhere along the continuum lies the proper policy. Maggiore thought that the science does not warrant any action involving ARV drugs or funding for HIV research.

In his final remarks, Foley finally articulated a position directly addressing the philosophical points that support Maggiore’s arguments. No science is certain enough to meet her requirements. Since the dissenter’s arguments make it impossible to justify any AIDS policies, it should be rejected. “Every other virus or bacterium out there uses the same types of tests, uses the same epidemiology. I mean, it’s not like HIV research went off in this direction. *Everybody* studying *every* virus uses serology and so on . . . *Any* medical test that you know has a failure rate. No matter, you know there’s virtually no test out there that’s 100 percent accurate” (76). If we followed Maggiore’s advice, we could never do anything. The fact that there is injustice perpetrated against AIDS patients in some instances currently need not indict the whole process. And it certainly should not be used as warrant by individuals to reject treatment.

The WPDU debate provided significant clash on AIDS etiology. Its transcript has helped us understand the issues at stake in the public rhetoric over the issue. Since the major points of disagreement are about theories of causality and evidence, the more that the arguments focus on those issues, the easier it is for observers to evaluate the controversy. Since these arguments take place in the public sphere and are addressed to lay persons, the scientific debates are infused with ethical and moral considerations as well. These elements of the debate have a direct impact on how one views the technical issues of etiology and the effectiveness of drug therapies. Casting the issue in terms of policy further opens the door to the types of material considerations that have come to define AIDS dissent post-Duesberg.

We may now consider the relevance of the lessons learned by the development of Western AIDS dissent for our analysis of Thabo Mbeki. AIDS dissenters have a view of when science policy is warranted that is mutually exclusive with that of the orthodoxy. The experience of intransigence on AIDS in the West has developed a view of the disease controlled by an epidemic psychology that forgives uncertainty in the interests of saving lives. Once dissent clashes with the orthodoxy, these differences in views become clearer. As dissent migrated from technical to popular forums, it became more political and focused on issues of credibility and motivation.

While the initial articulations of AIDS dissent by Duesberg et al. involved technical considerations of how certain we should be before adopting a scientific theory and acting upon it, the political issues brought to the surface by Maggiore require a reexamination of the position. How one views the status of Koch's Postulates, or whether causal inference is a legitimate scientific technique, is a decision informed by the political views of the judge. Maggiore clearly believes that the presence of motives of profit and prestige warrant reliance on high standards of

proof for AIDS science in order to counter conflicts of interest. It is not at all clear that, even if these high standards were met, Maggiore would be satisfied. AIDS dissent for her is both a scientific and a political argument, and the nefarious motives of the AIDS orthodoxy would remain even if more evidence were produced to support the HIV theory (and indeed, since that evidence has emerged, her objections have remained). This latter body of AIDS dissent looks very different from the early articulations. The political arguments are not to be found in the journal writings of Papdopulous-Eleopulous or Duesberg. But many have suspected that such political motivations were always there on the part of the dissent's technical advocates, but were held in check by the editorial constraints of peer-reviewed journals.

In Chapter 4, we will have the chance to confirm that very hypothesis. In Chapter 2, Mbeki's justification of a Presidential AIDS Advisory Panel was discussed. Having seen how AIDS dissent developed in the United States, we are now able to see how Mbeki's Presidential Advisory Panel, the most focused clash of the two sides in history, affected the AIDS policy controversy.

4.0 CHAPTER FOUR

As we left chapter 3, the migration of AIDS dissent into public argument forums had brought competing philosophies of science and epistemologies to bear on issues of public policy surrounding the epidemic. In this chapter, we return to South Africa to continue the investigation of this confluence between philosophies of science and public policy prescription. The rhetorical energy emitted by President Mbeki in his infamous April 2000 letter on AIDS policy (see chapter 2) was spent in the interests of creating a Presidential Advisory Panel on AIDS. Mbeki brought in scientists on both sides of the AIDS debate to make policy recommendations for his government. The report of the panel is a unique document in the history of AIDS dissent. It is the most extensive record ever produced of the direct clash of the scientific arguments for and against the HIV theory. It is also a pivotal moment in the history of AIDS rhetoric in South Africa, the culmination of several years of political wrangling between Thabo Mbeki and most of the world.

This chapter is devoted to an examination of that report, with particular attention to its rhetorical form and function. The report faces an internal challenge as it tries to fairly represent the stark disagreements of the panel members. Analysis of how the rapporteurs present the panel's deliberations will be the first task of this chapter. The report was designed specifically to open a space where the two sides could directly clash over the science of AIDS and to apply those insights to public policy recommendations. This tension between scientific debate and

policy prescriptions raises significant rhetorical issues about how science advisory panels evaluate evidence and generate argumentation that will be addressed in the chapter's second section. Following that, the report itself will be analyzed. The particular focus will be on how the technical disagreements about causality and evidentiary standards between the two sides come to bear on the eventual policy recommendations made. I will maintain that rhetoric informs the report at all levels, even the technical deliberations over AIDS science. But before examining this case, let us take up the form of the report.

4.1 THE PRESIDENTIAL AIDS ADVISORY PANEL

South Africa's National Research Foundation (NRF), a government agency that distributes grants for academic research, was responsible for drafting the final report. The 134-page document is divided topically into ten chapters. After an introduction, chapters two through seven each address a different issue in dispute between the orthodox and dissenting scientists (etiology and transmission; surveillance; HIV tests; ARV drugs; preventative measures; socio-economic factors). Chapters eight and nine present the policy recommendations of both sides of the debate, and chapter ten concludes the report. The report reads like the minutes of a committee meeting, stating who said what in response to whom. A representative paragraph about viral isolation demonstrates the style of the rapporteurs:

Dr. Giraldo accused the proponents of the theory that HIV causes AIDS of attaching a lot of value to PCR amplification of fragments of nucleic acids because of their inability to isolate the complete HIV particles even from patients at the height of the disease. Furthermore, PCR is not quantitative because it is not reproducible—repeat

amplifications of the same sample delivering different results. Prof Montagnier concurred that the PCR test was not very quantitative. However, Dr Morris presented data showing that virus could be quantitated using PCR and that this quantitation was of prognostic value (18).

When referred to at all, data and studies are almost always mentioned in passing, such as “Dr Papadopoulos-Eleopoulos claimed that she had at least 15 references where the evidence shows that HIV does not destroy the CD4 cells” (21). In fact, the whole report only has twelve footnotes. In many ways, the document is stenographic. What was said in the room or written on the internet is what the rapporteurs recorded, with no attempt to verify or extend those statements.

Invitations for the panel went out to sixty-three scientists and medical doctors in late 1999. Half were adherents of the orthodoxy and half were dissenters. In May of 2000 thirty-two of the invitees convened in Pretoria, and in the following June a different combination of thirty came together in Sandton. For those unable to attend one or both of the meetings, an internet forum was made available. The report is a digest of the arguments presented in both the face-to-face meetings and the Internet discussions, a “synthesis report of the deliberations by the panel of experts” (1). At no point did the entirety of the panel ever convene in the same room.

As a result, the report should not be considered a direct transcript of those deliberations.⁸ But that fact does not make the report useless for our purposes. On the contrary, the strategic choices of the rapporteurs to focus on the salient issues of disagreement over AIDS science avoids the tangents that no doubt occurred during the actual meetings. The rapporteurs present the most carefully constructed and most representative arguments from both sides in the report.

⁸ The report alludes to the existence of audio recordings of the meetings of the panel. While they are not publicly available, they would no doubt make for a fascinating comparison to the written report in the future if they could be secured.

And since this report was the artefact of those deliberations that was presented to the world, it is appropriate to consider how the claims within it were justified to that global audience.

Still, using this digested report forces the omission of what were no doubt very heated exchanges during the deliberations. The rapporteurs acknowledge this when they note that “the gallant efforts of very able facilitators did not succeed in preventing the panel from polarising into two main camps based on whether HIV is the primary aetiological agent for AIDS” (14). Details of just how polarized the camps were are omitted. However, press accounts of the meetings can give us a sense of how polarized the camps were. Apparently, the debates were not just intellectual but personal. “Emotions ran high in the panel’s dispute of divergent hypotheses on HIV and AIDS, with representatives of opposite camps shunning each other in the corridors of the Crowne Plaza hotel in Sandton, where the Presidential AIDS Advisory panel held its second deliberations on July 5 last year” (Harvey, WOZA Internet, Jan 2001).

The rapporteurs describe the difficulties encountered in digesting the heated and polarizing discussions among the participants:

The report attempts to reflect as objectively as possible the content of the deliberations, contrasting opposing views, highlighting areas of consensus and identifying gaps in knowledge. It was written with no intention to favour, reinforce or disfavour any particular viewpoint or side as any such favouritism would be contrary to the spirit and instruction of the Cabinet of the South African government. The report represents a summary of the deliberations, debates, views, opinions and recommendations and explicitly avoids passing judgement on the validity, or lack thereof, of the arguments made by the panellists individually or collectively. It needs to be emphasised that

facilitators and rapporteurs were not judges who were expected to pronounce a verdict on winners and losers (14).

In chapter three, we analyzed an exchange between these two camps in the pages of Science magazine where the orthodox scientists emerged as the clear victors. There a reporter served as a mediator, rendering judgment on the issues where he found it appropriate. Here, the rapporteurs seek to avoid the fray, eschewing editorializing or preference for one side over the other. Neither side “wins” in this report except through the judgment of the reader.

This mandate for objectivity was difficult for the rapporteurs to meet. Even though the final meeting of the group was in June 2000, it was not until 2001 that the report was released. An earlier version of the report was withdrawn because it was alleged to take sides. “The report itself is likely to become the subject of controversy. There have been unexplained delays in its compilation. An early draft report, which was circulated to panel participants in August, leaned heavily towards the views of orthodox AIDS scientists, according to several who had seen it” (Sidley, Bus Day, Jan 2001). That version, not available to the public, was later changed to provide more balance between the orthodox and dissenting perspectives. It is that altered version that is the subject of this analysis.

But the report significantly intervenes on the side of the dissidents in at least one sense. The very creation of the panel affirms the worthiness of the dissident’s arguments in a way that almost all other scientific venues had denied for years. The panel circumvents the techniques of forum control used by orthodox scientists to control debate (Sullivan 2000). No scientific authority had the power to exclude participants. All that was needed to gain access was the invitation of President Mbeki. Of course, excluding the dissidents would have been an intervention as well, this time on the side of the orthodoxy. Even if the decision to exclude is

justified, it is still an intervention, one that is inescapable whenever decisions about access are made.

Mbeki sought even distribution between dissenting and orthodox scientists on the panel in the interests of fairness. By another perspective, a fair panel would not equally represent the two sides. Rather, invitations would be proportional to numbers of adherents to the two positions in the scientific community. “James McIntyre, an expert on mother-to-child transmission of HIV, said the fact that about half the panellists were orthodox and the other half dissident meant that the panel was skewed considering most scientists held the orthodox view. He said it was extremely unlikely that the group would come to a consensus viewpoint, as they had not done so in the past 10 years” (Lamberti 2000). The Advisory Panel was structured so that each argument was equally defended, not so that each side was proportionally represented.

One wonders why the orthodox scientists would agree to participate at all in such a body. The decision was easy for the dissenters; Mbeki had provided a forum that they could not produce themselves. But for the orthodox scientists, the question was more complicated. Does one participate in an advising forum when the audience (the President) has already signaled his unwillingness to accept the orthodox position? On the other hand, can orthodox scientists justify leaving the arguments of the dissenters unanswered in the panel’s final report? Participation on the panel by orthodox scientists seems an example of what Primack and von Hippel (Primack 1974) call the “advisor’s dilemma.” “If he [a scientific advisor] refuses to participate in a system which is being used to mislead the public, he will also be refusing to give his government the benefit of his advice” (101). As it so happens, many of the invited orthodox scientists decided that participation was the best strategy, even at the risk of amplifying what in their minds were dangerous views.

Apart from the distribution of panelists, other formal elements mark this report as unique. The charge of the panel was truly broad. Unlike other advisory panels, Mbeki's group was not simply tasked with considering a few controversial or emerging elements of science, but a complete examination of an entire sub-discipline. This stance was born of Mbeki's personal explorations of the issue and his desire to have a firmer foundation for his policy decisions. The New York Times quoted his remarks before the opening meeting of the advisory panel.

The problem was so big that I personally felt that I wanted to understand this matter better I'm reading all these complicated things, language I don't understand . . . So I pile through lots and lots of research documentation. I've got dictionaries all around me in case there are words that are difficult to understand. I phone the minister of health and ask her what does this word mean and she explains (Swarns 2000).

Mbeki urged the panel to deliberate even the most basic issues of AIDS science. On other panels, such all-encompassing debate is rare. While scientists may disagree about whether global warming exists, they do all agree that the ozone layer exists! No such agreement on any issues exists in the AIDS controversy, as this dissertation has shown. Mbeki opened the door for even more disagreement and friction by putting more topics on the table to be debated than most all other advisory panels consider.

Likewise, no philosophical position is off limits and novel solutions are encouraged. The theory was that, when a problem is large, more deliberation and speculation is required to solve it. The rapporteurs write: "As governments are not expected to respond to catastrophes by merely doing what is routine, the South African government wanted to respond to this catastrophe in a manner that recognised that we were faced with a catastrophe. This was particularly important in this case as we were talking about the lives of millions and millions of people" (12). In chapter

three, it was demonstrated that it is at times of crisis, when the lives of millions are at stake, that deliberation is most likely to be bracketed, often because action is seen as more important. The epidemic psychology mandates policy, not discussion. But in this space that Mbeki created, dissent and exploration were encouraged as a proactive response to the crisis. Such an environment is designed to encourage the kinds of philosophical disputes that are criticized as dilatory almost everywhere else during an epidemic. That dynamic opens a space for the development of arguments that rarely see the light of day in other scientific venues and was later reflected in the polarization of the report.

The final formal element of the report that bears on a rhetorical reading is that issues of policy were fundamental to the panel's charge. From the start, the panel was to consider not just the science of AIDS, but how that science should inform political decisions of what to do. "It was the desire of the South African government to get answers to questions like these that prompted him [Mbeki] to establish an Advisory Panel of experts to assist the government in its informed response to the HIV/AIDS catastrophe" (13).

In the past, it has been customary to think that policy debates suffused with dense science should be determined by that science. According to that line of reasoning, once we know whether AIDS is caused by HIV or whether global warming actually exists, then we will clearly know how to act in the face of those problems. But this view of policy relevant science is increasingly being discarded in favor of more rhetorical models. Science studies scholars have argued for the contingency of scientific knowledge and rhetoricians of science have demonstrated the role of argument in deciding scientific debates. The result is a skepticism of science as the arbiter of public policy, even scientific policy. Brian Wynne (Wynne 1987) summarizes the trend, that "from the entrenched notion of science as an objective substratum

detached from but controlling any possible policy options, we would move to a view of science as organically embedded in the process of *persuasion* and *justification* [emphasis in original]” (97). The following rhetorical analysis will particularly focus on this intersection between science policy and scientific rhetoric.

And yet, to even have scientists in the position of recommending regulations or laws may seem odd. There is another view of science advisors, that they should answer the technical questions only and leave policymakers to the messy political matters. But, as Shelia Jasanoff (Jasanoff 1990) has argued, this belief in a non-political scientific advisor is a myth. When the end goal is policy formation, even the seemingly technical questions will impact the eventual social use of that knowledge. If the scientists are not charged specifically with recommending policies, the methods and standards of proof that they use to arrive at their conclusions on controversial technical questions will have rhetorical resonance in those policy arguments, no matter how objective we might wish the science was. In policy relevant science, even the most technical question is a rhetorical one, since the answers to those questions will have inevitable rhetorical force. Bruno Latour (Latour 1987) has argued that increasing technicalism occurs exactly when controversies proliferate into the policy realm. Both sides in a science policy debate develop more and more technical arguments designed to persuade each other and neutral third parties. While increasingly technical, the arguments must also rely more and more on rhetoric to be persuasive. The technical arguments in this report are deployed specifically to justify public action. It is that connection between science and policy that will be the focus of the following analysis.

Besides, in his analysis of American science advisory panels, Bruce L. R. Smith (Smith 1992) has discovered that relegating advisors’ input to purely technical issues often results in

poor and unfocused advice. “Scientific advisors get the best results when they are not acting as schoolmasters explaining the science of an issue, but when they attempt to make judgments and fit the issue within the total context of the aspirations, constraints, and trade-offs facing the policymaker” (202). At least in the present case, the question of whether scientists should give political advice is moot; Mbeki forced that issue with his charge to the panel to recommend policy. But even if Mbeki had only asked for technical clarifications, the decision over which standard of proof to use would itself have been political. Bringing up the issue of science’s eventual application to policy makes for better advice without the false belief in purely objective science policy advice. It also makes for a focused rhetorical reading of this particular report.

4.2 THE RHETORIC OF SCIENCE POLICY

Science policy debates are one of the classic areas of study for the rhetoric of science as well as science studies. Scholars interested in controversy studies in particular have examined the relationship between science and public policy. Englehardt and Caplan (Englehardt 1987) argue that one of the markers of a controversy is disagreement over philosophies of science and how they apply to a given dispute. Standards of proof and theories of science shift overtime, adapting to emerging evidence and changing societal contexts. One should understand these shifts in order to understand the controversy. “One must, as a consequence, qualify scientific controversies with a sociohistorical subscript to identify a scientific controversy with a particular scientific community, its rules for selecting evidence relevant to a debate, and its rules for reasoning on the basis of such evidence” (7). In a similar vein, Thomas Brante (Brante 1993) argues that exposing the often latent philosophical commitments of disputants in a controversy is a reason to study

them. All agree that theories of science have a substantial role in shaping later public arguments as scientific controversies move into policy arenas.

One of the reasons disputes over science policy arise is that there is a disagreement regarding the proper standards of proof to apply in a given case. These disputes are never entirely technical. Helen Longino (Longino 1990) has argued that crafting science policy always entails moral and ethical elements that decisively influence how judgments are made. For example, she remarks on the problem of dueling experts with mutually exclusive views of scientific evidence. It is folly to think that pure science will help us determine which conceptual framework to adopt in any given controversy. “The science is only relevant to the policy making that accepts the assumptive framework of the research. It cannot help us make the metaphysical, moral, and political decisions about human nature that provide the most basic kinds of foundation for policy” (231). These assumptive frameworks are chosen, not prescribed. And when they are debated, we may add, rhetoric becomes the means by which those decisions are made. This is especially the case with the Presidential Advisory Panel on AIDS. Mbeki explicitly desired a focus on both the science of AIDS and the moral implications of that science. The President’s own arguments rely heavily on the types of moral questions that Longino discusses. And his critics also heavily invoke the moral consequences of inaction. In a high stakes and policy relevant field like AIDS science, these moral questions are inescapable.

It is natural to conclude that, if moral and ethical elements become a part of scientific controversies, then increased public participation and deliberation over those issues is called for. After all, such issues are the purview of the people in a democracy. This move to democratization has its own influence on the conduct of policy relevant science. Helga Nowotny (Nowotny 1987) notes that the increasing calls for public participation in the production of

scientific knowledge force scientists to reexamine the way that they practice science itself. “Although the critical dismantling of some of its features came from inside science, so too did public controversies throw open the not-so-objective sides of objectivity and add the weight of context-dependency to the process of scientific inquiry” (67). The ways that evidence is gathered and knowledge claims are made become an issue in policy deliberations. Public scrutiny sheds light on how the choices of the researcher later impact conclusions that are produced. Such a recognition, Nowotny argues, is not an assault on science. Rather, the point is “that the definition of a scientific problem is never isolated from the political context in which it occurs, nor can political implications be completely eliminated from the course of the analysis and policy conclusions derived only at the end” (67). That the researcher’s choices regarding theories of causality or thresholds of evidence influence the outcome of policy relevant science is simply a fact. And when those choices have moral or ethical consequences, then a space for public participation should be opened, at least for those who believe such issues should be deliberated in a democracy. Relying exclusively on technocrats to make such decisions precludes that input.

Another way to put this point is to frame it in terms of argumentative style. Specifically relating to AIDS dissent, Joan Fujimura and Danny Chou (Fujimura 1994) have discussed what they call different “styles of scientific practice,” which they define as “different rhetorics and rules for judging the adequacy of statements that are embedded” (1022) in the arguments of both sides. Here, different standards for evaluating a causal claim, for example, are the products of different ways of arguing. Fujimura and Chou argue that dissenters by and large employ a view of scientific practice that demands the highest standards of proof for knowledge claims. But orthodox scientists employ what Fujimura and Chou call an “epidemiological style of practice”

that relies on more circumstantial and inferential forms of proof. “Scientists working on AIDS construct a mosaic framework of data, materials, technologies, and knowledges produced by different expertises or methodologies” (1023). Taken alone, no one element of the puzzle is enough. Put together, they present a convincing account of the disease.

Duesberg and other dissenters, Fujimura and Chou argue, refuse to allow such mosaic justifications. “For Duesberg, each piece of information supporting the case against HIV should precisely fit with other pieces; otherwise researchers are building a house of cards. In contrast, epidemiologists and retrovirologists in AIDS research vindicate their conclusions through the *association and accumulation of ambiguous and incomplete data* [emphasis in original]” (1029). This dissertation has maintained that a stronger claim is warranted: the differences are not only stylistic but arise from implicit and divergent philosophies of science in both sides. But Fujimura and Chou do remind us how the manner of presentation matters when judging arguments. It is common for rhetoricians of science to note the role of style in disciplines that are supposedly free of rhetoric. Even mathematicians use presentation techniques to improve the understandability and cogency of their proofs (Davis 1987). The stylistic differences become even more important if they arise from irreconcilable standards of proof. Not only are the conclusions made by both sides at odds, but they also disagree on how those knowledge claims ought to be made. In this case, the Panel spent tremendous amounts of energy debating not only what standard of proof to apply to AIDS science, but what a properly formed argument ought to look like.

4.3 THE SCIENCE OF THE REPORT

Like the early debates over AIDS etiology covered in chapter three, the panelists spent much of their time deliberating two major scientific issues: the causal role of HIV in AIDS and the scientific status of causal inference in epidemiology. Of particular concern in both issues is deciding between traditional and novel standards of proof for AIDS science. We will deal with each in turn.

4.3.1 Etiology

The perennial question of AIDS causality dominated the early chapters of the report. “Most of the participants agreed that HIV exists, but not all acknowledged that it causes AIDS” (15). It quickly became clear that standards of proof were pivotal in the disagreement. Specifically, the flexibility with which we apply classic theories of science to emerging sciences was a constant source of disagreement between the two sides. “There was a body of opinion expressed in the panel that ‘purification’ of a virus, as well as electron micrographs of the ‘pure’ virus was essential to answering the question as to whether a particular virus exists or not. According to Drs. [Etienne] de Harven and [Valender] Turner, HIV has never been ‘purified’ and no electron micrograph of the ‘pure’ HIV ever published” (16). This goal of isolation is the so-called “gold standard” of traditional virology. “Dr Turner then went on to explain that in virology it is usually considered essential to take an electron micrograph of the gradient-purified material to prove that it contains retroviral particles” (16). This type of argument is consistently made throughout the report. Traditional theories of causality, what is “usually considered essential,” should be applied to HIV. The search for “gold standards,” defined by methods developed decades before retroviruses were even discovered, is the preferred standard of proof for the dissenters.

Making exceptions for HIV or recognizing its emergent nature is rejected by the dissenters as unscientific. “The opponents of the HIV/AIDS hypothesis described the assertion of AIDS as an infectious, viral and transmittable syndrome as based on a set of beliefs and myths and not on scientific facts” (21). Facts are here being defined as knowledge claims that meet traditional standards of proof. Suspicion of HIV as the cause of AIDS is warranted because the evidence for that claim does not resemble the evidence for other viruses. For example, “Prof. Duesberg explained that the PCR test typically identifies only 1 in a 1,000 or, at most, 1 in 100 cells, as being infected with HIV, and, in some patients, the virus is not found at all. In the case of a true pathogenic infection of a virus (for instance, hepatitis virus), every liver cell would be infected” (21). In this view, being a “*true* pathogenic virus” means behaving like other viruses. Deviations from the norm are themselves grounds to mistrust the causal nature of the HI virus.

Duesberg continues his argument that HIV simply does not fit the historical pattern of other viruses. He describes “three *classical hallmarks or characteristics* [emphasis added] of an infectious epidemic that distinguish it from an epidemic caused by toxins or lack of nutrients” (34). These are an exponential increase in infections, the fact that infections are random between men and women as well as homosexuals and heterosexuals, and “thirdly the microbes that cause microbial or infectious epidemics are highly specific, reflecting the very limited genetic information of the causative viruses or microbes” (35). When these dynamics are not found, as he believes they were not in the AIDS epidemic, then we should look elsewhere for etiology. He urges that we consider that “chemicals or toxins like nicotine, alcohol, cocaine or heroin; nuclear radiation; and lack of nutrients such as vitamin and protein deficiencies cause the epidemics” (35). He gives little positive evidence that these alternative etiologies are the genuine ones. Rather, the argument rests on the supposition that the method of infection for AIDS makes a

chemical thesis the most plausible. As before, no allowance is made for potential differences in infection rates and distributions between traditional viruses and retroviruses. In Duesberg's estimation, all viruses should be held to the same standards.

Orthodox scientists responded by asserting that these classic standards of causality should not apply to retroviruses. Retroviruses are unique and do not fit the patterns of traditional viruses. Isolation from the blood in line with Koch's Postulates is not necessary because in the case of HIV such techniques are impractical. Retroviruses are uniquely resistant to isolation because they exist as free floating fragments of RNA in the host, not as complete entities. Orthodox scientists maintain that, in order to make up for this lack of full isolation, a series of other, more circumstantial techniques can be used to prove a link. "Dr. [Lynn] Morris pointed out that it was still difficult to visualise the virus in peripheral blood in spite of high viral loads. She asserted, however, that visualising the virus is not really necessary since there were other equally acceptable ways of 'seeing' the virus including PCR, p24 antigens and viral culture" (17). Taken together, all of these different measurements point to the presence of HIV. Such corroboration overcomes the lack of the "gold standard" of viral isolation. Morris supplements these more limited visualization techniques with a common sense appeal. "She further argued that it would hardly be possible to culture an organism that was not found in peripheral blood in the first place" (17). This is Fujimura and Chou's mosaic style of orthodox argumentation in action. The orthodox scientists bring together several different kinds of evidence, coupled with logic, to build a case. Even if Koch's Postulates are not fully met, all of the other evidence that we have makes it highly probable that HIV causes AIDS. On this view, the one hundred year old postulates are inappropriate for retroviruses that are new and behave differently. Koch could not

have anticipated retroviruses, so new (in this case softer, more mosaic) standards of proof are in order.

Debates between tradition and innovation also occur in the positive arguments for alternative etiologies posed by dissenters. Narcotics provide a better account for the spread of AIDS than HIV, dissenters allege, because those substances classically produce infections in the patterns that AIDS appears to follow.

Dr. Duesberg believes that the ‘chemical AIDS hypothesis’, and not HIV, explains all aspects of AIDS in the USA, Europe and Africa. The steady rise in AIDS cases is more in keeping with toxic causes as an infection would be expected to produce a bell-shaped curve with decline due to spontaneous immunity and deaths. Furthermore, infections would be expected to affect people randomly, rather than the selectivity shown by AIDS. Also, viral infections are specific causing only one syndrome and not over 30 AIDS-defining conditions (23).

Duesberg set up expectations for the causality of AIDS based on our previous understanding of how infections spread, and then chose the etiological theory that best met those expectations. This time, his argument did not even articulate a standard of proof beyond historical patterns. Rather, narcotics made more sense as causal agents for AIDS than HIV given what we know about how toxins and viruses work.

Orthodox scientists responded with a series of reasons explaining why HIV is exceptional and should be expected to behave differently from other viruses. These include the long incubation period of the disease and the fact that transmission through sex definitionally limits the population to which the disease can spread. This explains why infection rates tend to be very specific demographically. In their eyes, assuming that AIDS should spread like other viruses

begs the question of whether AIDS is like other viruses in the first place. Since it is spread sexually, the infection patterns are different from other diseases. Since retroviruses are different from regular viruses, we cannot expect them to behave similarly. Rather than some sham science, retrovirology is a new science, requiring its own standards of proof. After all, human retroviruses were first discovered by Gallo in 1979 (Gallo 2005), and HIV was only discovered in 1984. New knowledge requires new philosophies of science and standards of proof.

What has emerged is a kind of demarcation debate. Dissenters maintain that AIDS science is not a legitimate science because it fails to adhere to traditional standards of causality. They say retrovirology is myth, not a product of sound scientific practice. This strategy of finding universal rules for distinguishing between genuine and pseudo-science is a classic demarcation technique. Charles Taylor (Taylor 1996) has written on the rhetorical role of demarcation in science. He argues that when used argumentatively to cast doubt on one's opponents, this appeal to some scientific tradition as a demarcation standard runs into significant problems. Every branch of science will have its own peculiar standards for experimentation. As Taylor argues, "Methodologies are necessarily bound (even subordinated) to the demands inherent in particular historical and practical contexts" (39-40). What makes science "genuine" is negotiated between practitioners locally. In this report, we see such an attempt. AIDS scientists defend their novel and communally agreed upon standards of proof. Dissenters challenge with more general and traditional theories of science.

These demarcation techniques are not unique to AIDS science. In his examination of creationism, Taylor noted the same phenomenon. While overt references to epistemology are rare in that literature, opponents of evolution, "apparently unencumbered by the quantum revolution and the past century of the philosophy of science" (144), hold to seventeenth and

eighteenth century understandings of observation and proof. Taylor continues: “*True* [emphasis in original] science, from this perspective, abandons so-called metaphysical flights of fancy in favor of close empirical observation and strict processes of induction from those observances” (144). According to some creationists, evolutionary science is not legitimate because evolution cannot be observed. According to AIDS dissenters, retrovirology is not legitimate because it violates traditional virology. This type of debate is not merely a semantic one. Choosing between these philosophies of science is of the highest importance to crafting public policy. If evolution is not a true science, then we should probably tolerate instruction in creationism. If retrovirology is considered pseudo-science, then handing out toxic ARV drugs should be suspended. Once legitimate science is distinguished from pseudo-science, then which side has the better arguments should be much easier to determine.

One view of epidemiological causality that was not discussed at the meetings is a set of criteria developed by Bradford Hill in his lecture before the Royal Society of Medicine entitled “The Environment and Disease: Association or Causation?” (Hill 1965). Hill outlines nine principles for causality in epidemiology in a checklist style (Phillips 2004) while at the same time rejecting generalizeable rules for such a process. Instead, causality is more of an intuitive process, since all inductive science is inferential at some level. Hill admonishes that this intuitive element to public health science does not license us to “postpone the action it appears to demand at a given time” (300). This sentiment seems right in line with the orthodox view of how causality ought to be approached. However, it seems dubious that the Hill’s criteria would have satisfied the dissenting critics. Their rejection of causal inference, and their insistence of causal criteria that assume laboratory conditions, is not obviated by Hill. Rather, he rejects such

rigid thinking. The etiological debate can only be resolved by addressing this fundamental difference over whether statistical proof can ever be sufficient to prove causality.

4.3.2 Epidemiology

The argumentative strategy of comparing tried and true scientific methods to the purportedly shadowy and speculative practices of retrovirology was also used by dissenters on the question of epidemiology. At the beginning of the report's section on the surveillance of HIV, the philosophical disputes over causality manifested themselves again. The rapporteurs write:

There was widespread agreement that surveillance is a necessary tool for understanding the AIDS epidemic. However, there were two opposing schools of thought on the issue of HIV surveillance. One group subscribed to the argument that HIV surveillance is an exercise in futility as it has not been proved that an individual that is HIV-positive will develop AIDS. Thus a more useful marker is AIDS disease. The opposing school of thought argued for the importance of conducting both HIV and AIDS surveillance. They argued for observed correlation between HIV-positive status and AIDS disease (37).

We begin here to see the political impact of whether or not “observed correlations” are enough to justify government policy on surveillance. But before we consider that issue, we will take up the scientific dispute itself more closely.

While appeals to traditional theories of science once again appear in the discussion of epidemiology, that debate had a twist. Epidemiology has developed its own historical standards of proof, different from virology. We noted in chapter 3 the role of causal inference in epidemiology. Because that science is necessarily statistical and inferential, its historical standards of proof always have been softer than a laboratory science. Unlike the etiology debate,

where tradition was used against HIV, the arguments from tradition here are used *in favor* of the orthodoxy. “Dr. [Zena] Stein argued that in standard epidemiological practice, causes do not need to be ‘necessary’ and ‘sufficient’ to cause disease. She quoted from Dr. M. Sussers’ manuscript for a forthcoming encyclopaedia on public health: ‘HIV is (and can be so regarded) as a cause of AIDS even if everyone who has HIV does not get AIDS’” (41). Epidemiologists advocate a “multi-causal approach” to AIDS, just as they do for diseases such as tuberculosis and syphilis. The old standards of virological causality, such as the Koch Postulates, have never applied. “She [Stein] explained that modern-day epidemiologists share a multi-causal perspective that deviates somewhat from Galileo’s seventeenth century formulation that causes should be necessary and sufficient, and Koch’s subsequent postulates, which served to guide the search for specific organisms as one-to-one causes of given diseases. Thus, in her view, HIV does not need to be necessary and sufficient to cause AIDS” (41). The distinction is between etiology (which studies the biological causes for disease) and epidemiology (which studies the societal manifestation of disease). The former is clinical, amenable to study in the laboratory. But the latter requires statistical proof and deals with environmental factors that mandate multi-causal theories.

Thinking of causality from an epidemiological standpoint opens the door for a different meaning of the old “necessary and sufficient” standard for causality. “Dr. [Carolyn] Williamson presented evidence that HIV is *necessary* and *sufficient* to cause AIDS but that co-factors increase the risk” (19). Sufficiency here does not mean “if you have HIV, then you will get AIDS.” Rather, it means “if you have HIV, and other conditions are right, you may get AIDS; but without HIV, you cannot get AIDS.” These co-factors are an essential element when

viewing a disease epidemiologically. One always has to account for contextual dynamics when looking at broad populations.

The subtle shifts in which standards of proof apply to which branch of science pits two seemingly defensible philosophies of science against one another. The dissenter's insistence on "necessary and sufficient" and Koch's Postulates are textbook science. But epidemiology is itself a legitimate method of inquiry in the eyes of most. Its claims to special standards of proof are long accepted in the minds of most scientists. Both sides have rhetorical potency. And both are able to marshal similar argumentative tropes, such as appealing to tradition. In virology, such traditions seem to question the HIV hypothesis; in epidemiology, those same appeals support it. Yet both sides use tradition as a reason for preferring their own standards of proof over another.

Not until the standard of proof debates are resolved can one make a final decision about the status of AIDS science and what public policy should flow from that knowledge. Before we bemoan the fact that such a decision is necessary, we should remind ourselves that scientific reasoning always requires such decisions. "Treating reasoning as a practice reminds us that it is not a disembodied computation but takes place in a particular context and is evaluated with respect to particular goals" (Longino 1990). The report has brought to light choices between standards of proof that are continually made by scientists, but rarely brought to the surface. Disputes over standards of proof are inevitable in controversies. And these disputes are likely to be even more highly charged during an epidemic. That context will indelibly shape the eventual decision over which standard of proof to adopt. Many scientists will coalesce around one set of theories in the interests of tackling the problem, but disagreements will still persist.

Of course, coalescence around some standard of proof does not mean that it will ultimately be seen as scientifically sound or politically just. Once a certain standard has been

adopted, as it has been in the West on AIDS, there should always be the opportunity for critique. Facilitating such a critique was exactly why Mbeki formed the Presidential Advisory Panel in the first place. But when a majority adopts a particular standard for evidence, critiquing that standard does become a daunting task. Assignment of the burden of proof will always favor the dominant side in such disagreements. Harvey Brooks (Brooks 1984) gives an example of environmental regulations. Economic and political interests accrue against costly policy changes. To overcome that institutional inertia, environmentalists often advocate softer standards of proof for scientific evidence than ones that might prevail in the laboratory. “If only one experiment or piece of data indicates a possible hazard in the face of a preponderance of other evidence, then that experiment or datum should be given extra weight in setting standards or establishing regulations” (41). The reason for the new burden of proof is pragmatic; the consequence of waiting too long to act on emerging evidence could be an environmental disaster. The debate in AIDS science falls along similar lines. Orthodox scientists demand a lower burden of proof on their evidence because retrovirology is new and because there is an ongoing epidemic. Dissenters argue for a high burden of proof because they believe retrovirology is unscientific and should therefore be viewed skeptically. For both sides, the consequences of assigning the burden of proof to one side or the other is a heavy factor in the decision.

Jerome Ravetz (Ravetz 2002) echoes this insight in his explanation of “post-normal science.” Relying on “normal” views of science as value neutral does little to aid our decision making when policy disputes erupt, especially when that science is emerging or controversial. Instead, Ravetz defends the need for making value judgments at times of high uncertainty in policy relevant science. He offers the example of statistical proofs in food safety research. “We may say that any statistical test might be overly selective, rejecting causal correlations that are

probably real; or it might be overly sensitive, accepting causal correlations that are probably accidental” (259). Recognizing the “post-normal” status of a new science will force scientists to foreground the pragmatic implications of choosing one test or standard of proof over another. The members of the advisory panel may not have put the status of causal claims on their agenda, but those issues are a constant theme in every issue they did deliberate. However, much of the deliberation misses the essential question of *how to choose between standards*. Instead, one side defends traditionalism and the other innovation. Moreover, depending on the particular scientific issue involved, the sides switch their position on that issue.

Regardless of the consistency of either sides’ advocacy, one point remains constant. The standard of proof debates cannot be resolved merely by applying technocratic methods. No experiment will tell us whether to apply Koch’s Postulates to HIV or to employ some newer standard of proof. At some point, one must choose between evaluative criteria. That decision must be contingent, predicated on political considerations and the product of weighing uncertain arguments. Rhetoric, in short, is required to resolve this controversy.

Both sides deconstructed the epistemological preferences of the other as they relate to etiology and epidemiology. Needing to formulate recommendations in the report, though, created a whole new set of problems for the advisors. Sheila Jasanoff (Jasanoff 1987) has observed that while debating scientific controversies each side undercuts the other’s standards of proof or evidence, thereby delegitimizing the other. But once that debate has run its course, a new issue emerges: how does one move beyond all that deconstruction to build a positive case for public policy based on either the view of the science from either side? The expanded uncertainty of the arguments on both sides potentially paralyzes those looking for answers to the problems that drive the controversy in the first place.

Exploiting this dynamic is a classic tool of those opposed to changing policy. One can purposefully challenge the certainty of scientific claims in an effort to remove discretionary power from government officials. Jasanoff gives the example of how the chemical industry casts doubt on the science of environmental watchdogs in order to prevent action. “It [the industry] suggests, for example, that scientists frequently disagree in their interpretation of data, that experts can be found to support virtually any reading of the evidence, and that the choice among different interpretations is ultimately either arbitrary or else coloured by political interest” (198). If policy relevant science is so prone to subjectivity and disagreements, then how can policy makers implement costly and intrusive regulations founded on that science?

In the report, this problem is even more pronounced. After all, Mbeki’s mission was to create exactly this sort of doubt by having the panel explore all possible challenges to orthodox AIDS science. If exposing disagreements and bringing doubt into the picture makes policy adoption difficult, then the President has created fertile ground for slowing governmental action. Yet, President Mbeki asked the advisors not merely to question AIDS science, but to recommend policy as well. Can a consensus on policy emerge after these debates over standards of proof?

4.3.3 Policy Prescriptions

For a brief moment, the policy section of the report conveys common ground between the two sides. They both call for more and better data about AIDS in Africa. They also note that mortality data should be analysed by trans-disciplinary teams of researchers and government officials. There is a shared recognition that Africa is a unique context and that the impact of poverty and lack of education on AIDS must be examined more closely. But beyond these points, the two camps defend diametrically opposed positions. The split in policy proposals is

indicative of the philosophical disputes outlined earlier in this chapter. Each side begins with general, holistic recommendations before moving to specifics.

The general recommendations of the orthodox scientists offer no major changes from standard Western practices in dealing with AIDS (79), including aggressive calls for the introduction of ARV drug treatment programs in South Africa. Even though the orthodoxy appeals for more data specific to Africa, they do not change their belief that ARV drugs are desperately needed in South Africa. Some of the ways the orthodoxy hopes to better study African AIDS are through strengthening surveillance measures at antenatal clinics, blood banks and health facilities. They suggest tracking risk factors in youth and keeping death registers. They want public health professionals throughout the entire system to increase reporting on all aspects of AIDS. By collecting more information, they assert, it will be possible to provide more targeted recommendations about the various issues in AIDS prevention. In sum, the orthodox scientists advocate both learning more about AIDS in Africa and immediately distributing ARV drugs to South Africans. While they acknowledge the possibility that African AIDS has idiosyncratic differences from Western AIDS, the search for those differences should in no way impede immediate public health policy along a Western model.

The dissenters, on the other hand, presented general recommendations that have no association with the HIV hypothesis whatsoever. Instead, they defend a wholesale change in the standard approach to the disease. These include calls for the following:

1. The South African government should devote the bulk of national and international biomedical and other resources to the eradication of prominent AIDS-defining diseases such as malaria, TB and enteric infections and also to the improvement of nutrition and the provision of improved sanitation and clean water.

2. Anti-retroviral drugs and any other immune-suppressive drugs should under no circumstances be used to treat AIDS patients or any other patients that are immune-compromised. These drugs inevitably require significant amounts of compensatory medication and are claimed to produce, at best, only short-term benefits in seriously sick patients (83).

The first recommendation embodies the dispute over the causal role of co-factors for AIDS. Its advocacy of focusing on environmental conditions and the opportunistic infections themselves implicitly rejects the role of HIV. If malaria is the reason people are dying, then attack malaria. Hunting for HIV misdiagnoses the issue. The second recommendation rejects extant evidence on the efficacy of ARV drugs as too uncertain. The indubitable contention that ARV drugs are toxic is weighed against the uncertain benefits the drugs accrue. The philosophical disputes have here exploded into completely different and mutually exclusive policies. How one comes down on the disputes over theories of causality will largely determine what public health policy one advocates.

Having staked out those general policy commitments, the report moves to specifics. Each issue taken up throughout the report is addressed from a policy angle. Here, the two sides diverge even more. On surveillance, the dissenters recommend that the South African government “suspend the dissemination of the psychologically destructive and false message that HIV infection is invariably fatal and assist in reducing the ‘hysteria’ around HIV and AIDS” (79). The orthodox scientists, on the contrary, recommended strengthening the current surveillance policies and increasing AIDS awareness (80-81). On HIV testing, the dissenting panel members reasserted their beliefs that AIDS was not contagious, sexually transmitted or caused by HIV. Therefore, South Africa should “suspend all HIV testing until its relevance is proved especially in the

African context, given the evidence of false positive results in a tropical setting and the fact that most assumptions and predictions about AIDS in Africa are based on HIV tests” (79). The orthodox scientists defended widespread increases in HIV testing. The gulf between the two sides widens dramatically once policy questions are put before the panel. Taken together, South Africa looks very different under each camp’s views. One would increase testing and data gathering, and make drugs available. The other would suspend testing, focus instead on entirely different conditions, and deny access to ARV drugs. The resolution of the scientific debates has now come to impact the lives of millions of South Africans.

Shifting from an academic dispute to a political one brings out the rhetorical issues in the debate. In the context of an ongoing epidemic where uncertainty exists as to the cause and solution to the problem, decisions must be based on imperfect evidence. Judgment of knowledge claims surrounding AIDS must be aided by appeal to political or ethical issues that work to justify one scientific viewpoint over another. Two rhetoric factors stand out from the panel’s deliberations.

4.4 RHETORIC IN THE PANEL’S DELIBERATIONS

4.4.1 Ethics of Uncertainty

Many of the etiological and evidentiary debates in the technical deliberations of the panel could be considered debates over certainty. But those disputes took on a whole new tenor when policy recommendations were on the table. Here, the moral and ethical issues were no longer latent.

The questions became overtly ethical ones. Are the current data certain enough to ethically justify either providing drugs to people or denying them?

The rapporteurs recognized the importance of this issue and drew a connection between the etiology of AIDS and the ethics of drug availability.

On the one hand, for panellists who disputed the causal linkage between HIV and AIDS, the use of an anti-retroviral drug to treat a disease that was not caused by a retrovirus was deemed morally indefensible. On the other hand there were panellists who subscribe to the causal linkage between HIV and AIDS and who argued that sufficient and incontrovertible evidence existed in the scientific literature and from clinical experience which affirmed the value of anti-retroviral drugs in the treatment of HIV/AIDS (56).

This is not only an epistemological issue. It is an ethical one, and the only way to adequately settle the scientific issues is to wrestle with the ethical issues, since the two intertwined.

One of the consequences of bringing ethics into these epistemological debates is that they weaken the appeal of conservative arguments. Conservative here means not necessarily a political ideology but a bias against change, although often political conservatives do make these arguments against progressive action. One way to oppose change is to set the bar for proving that change is needed so high that it cannot be met. Orthodox scientists claim that invoking Koch's Postulates when considering retroviruses is such a move. But once the debate migrates from a technical into a policy realm, where moral and ethical issues are always germane, then the standard of proof must be justified against the consequences of inaction. Those who oppose change now cannot simply defend their high standards of proof against softer ones, but rather must confront the potential of unnecessary deaths. Bringing in ethical issues makes the conservative argument a much taller order.

The same dynamic is found in the report on the issue of HIV testing. On that issue, it is the dissenters who advocate change through abandoning the status quo of HIV testing. David Rasnick states the ethical implications of the uncertainty dissenters see in the tests. He calls for a moratorium on testing in South Africa “since the results of all the tests are unreliable and non-specific and hence give wrong information” (53). Giving patients wrong information steers them in the wrong direction for treatment and imposes on them psychological trauma. The more moral action, in the view of the dissenters, is to abandon testing because it is far too likely to cause the problems. “The panellists who disputed that AIDS is caused by HIV declared it unethical for any person who reacted positive to [an] HIV test to be told that they suffer from a deadly disease and face certain death unless they received treatment” (73). The risk of false positives outweighs the information gleaned from further testing. The orthodox response is that current testing is certain enough to warrant expansion. But on both sides the argument for changing the status quo is bolstered by addressing potential material consequences.

In both cases, ethical considerations have changed how we are to consider the scientific issues. The competing ethical arguments, about drug availability on the one hand and accuracy in diagnoses on the other, begin to dominate the purely scientific issues. When in doubt, provide drugs. Unless one is certain, one should not risk a misdiagnosis. Policy relevant science is in this case being deliberated not only as a technical debate, but a public one as well. There is no way that one could retort “let the science decide” on the issue of ARV drug programs; the panellists themselves contextualize the scientific arguments within the ethical framework of a policy debate. That rhetorical issue has become central to the entire debate over AIDS science.

4.4.2 Political Standards of Proof

Not only a question of ethics, but also raw political warrants for supporting one standard of proof over another were exposed once the panel moved to direct considerations of policy questions. Not just scientific anymore, often the warrants for the preferred policies invoked ideologies and economic commitments. Two main ideological issues were especially important between the two sides.

One of those was naturalism. As the dissenters were more explicit about their alternatives to ARV drugs, their rejection of pharmaceutical treatments *for anything* became increasingly clear. Not just a reaction to particular ARV drugs, the dissenters presented a fourteen point plan that fully rejects almost all technologically derived medicines whatsoever. The recommendations listed below were proposed as necessary and sufficient to combat all the risk factors that are the real cause of AIDS (note especially 7 and 8):

1. Improving sanitation and public health measures to decrease water-borne diseases.
2. Strengthening health infrastructure.
3. Reduction of poverty and improving general nutrition and implementing nutritional education and supplements for the general population.
4. Improving screening for and treatment of sexually transmitted diseases.
5. Promoting sex education based on the premise that many sexually transmitted diseases and pregnancies could be avoided.
6. Implementing public education campaigns to destigmatise AIDS and reduce public hysteria surrounding the disease.

7. Investigating the use of immune-boosting medications, such as interferons, growth factors, B-complex vitamins and herbs (such as ginseng, Chinese cucumber, curcumin, aloe vera, garlic and echinacea).
8. Encouraging the detoxification of the body through several inexpensive interventions, such as massage therapy, music therapy, yoga, spiritual care, homeopathy, Indian ayurvedic medicine, light therapy and many other methods.
9. Treating infections vigorously and timeously [sic].
10. Increased support for and promotion of research into the development of drugs against AIDS, its cofactors and risk factors.
11. Encouraging the involvement of complementary medical and health practitioners, including indigenous healers, in research and clinical fields.
12. Implementing aggressive programmes to empower women and change the power relations between men and women.
13. Reducing the vulnerability of communities by improving access to health care.
14. Improving literacy. (86-87)

Many suggest similar methods of treatment for other diseases, especially cancer. The chemotherapeutic nature of both cancer and AIDS treatments attracts opposition from those who critique modern medicine in many of its guises. That which is natural and free from manipulation, is preferred over technologically crafted modern medicine. This cultural commitment to natural medicine is exposed only after the dissenters are asked to provide an alternative policy to providing ARV drugs.

This defence of naturalness as opposed to medicine stance is also a factor in their views of the nature of disease itself. They critique a myopic view of disease as only biological. “Prof.

[Sam] Mhlongo spoke of the preoccupation with biomedicine in an attempt to be scientific even at the expense of the wider distressing situation of poverty, poor housing, lack of sanitation and a multitude of diseases associated with the deprivation and urban squalor that characterise the reality of the majority of black South Africans” (54). Challenging contemporary medicine for reducing disease merely to biology is a common scholarly observation, not just a view of AIDS dissenters. Eric Cassell (Cassell 1993) remarks that medical technologies, such as PET scanners or MRI machines, often reduce diseases down purely to their biological aspects. Because they are unable to consider the social or emotional elements of disease, health professionals who exclusively rely on them focus on only one aspect of the experience of disease for the patient. The biological understanding of a disease becomes its first and last measure, and gives rise to a “technological imperative.” The disease must be treated if the means exist to do so. And this move has potentially negative consequences for the practice of medicine. In terms of life-support technology, the sway of the technological imperative has its most direct application. Daniel Callahan has defined the technological imperative as a “powerful cultural current, particularly in medicine: that if technologies exist, they ought to be used and usually will be used. They cease to become psychologically optional, even if in fact choices can still be made to use or not use available technologies” (Callahan 2003). He uses the theory to develop a cognate one, asserting that a “research imperative” exists where scientific knowledge is sought for its own sake. Research under this view should be pure, apolitical and ubiquitous. Under the technological imperative, technology should be used as a matter of course, itself absent of political implications. In both cases, one has no choice but to proceed.

Both concepts apply to the deliberations of the Presidential Advisory Panel in the ways that dissenters attempt to resist the inevitability of drug treatments. Callahan argues that when

research is done expressly for the interests of later profit (such as by pharmaceutical companies who later will sell drugs developed as a result of the research), the veneer of “knowledge for knowledge’s sake” is stripped away. Were profits not the motive for the research, very different studies are likely to be undertaken. We might study more malaria medicines and less anxiety drugs if drug companies were not primarily interested in which line of research has the greater chance for making money. Dissenting scientist Mhlongo implicitly extends this logic to AIDS treatments, arguing that a “drug imperative” exists, one that prevents us from considering or exploring less profitable but more effective alternative therapies. Both a technological and a research imperative are at work in the context of ARV drugs. They both reduce AIDS to the biology of HIV, and are the product of the profit motive of giant drug companies. In the dissenters’ fourteen-point plan listed above, the calls for Echinacea and yoga are supported by their desire to oppose the use of technological interventions and the capitalist structure of medical research in the West. Breaking out of that imperative is for them a political and economic move that under girds their scientific arguments about the efficacy of ARV drugs.

The orthodox response follows the multi-causal approach discussed earlier. Those panellists agree with the dissenters that social conditions must be improved in order to check the spread of the disease and fully acknowledge the causal role of contextual co-factors in contracting AIDS. These include increased sexual education and increased sanitation. But they still maintain that medicine is essential to fighting the parts of the disease that are biological. The orthodox scientists seemingly do not share the dissenters’ distaste for technological medicine. Neither do they see the profit motive that drove research into ARV drugs as delegitimizing their later use. That too is a political commitment, a background assumption about how medicine should be ethically practiced, that informs their reading of the particular debates surrounding

AIDS etiology and drug treatments. Deciding between the naturalist and technological models of medicine largely determines how one will view the scientific debates on the issue of AIDS. And making the decision between those models is a rhetorical one that requires normative judgements and relies on uncertain knowledge and persuasion.

A second factor in the panel's deliberations was geopolitics. Another foundation for the dissenters' position was a critique of the treatment of less developed countries by the West. In these arguments, HIV is seen as a pretext to control the nations of Africa. AIDS dissent became a part of general anti-globalization critiques offered by many members of the panel. For example, Roberto Giraldo, in a direct appeal to Thabo Mbeki, "urged the South African government to resist the violation of its integrity by the international community and to continue its quest for African solutions to this problem" (64). AIDS science in this view is part of a broader movement aimed at decreasing African national sovereignty. This is exactly the argument that Mbeki made in his 2000 letter (see chapter 2). Giraldo was very specific about the international agents that he felt were using AIDS as a strategy for *de facto* re-colonization. The rapporteurs note, "He criticised the World Bank for promoting international loans to get Africa to purchase AZT and other anti-retroviral drugs and condoms as well as do more HIV testing. This, he claimed is bound to increase poverty in Africa and increase the wealth in the west" (76). These points echo the arguments in chapter two from Anthony Brink likening Western governments and corporations to drug pushers. Get Africans hooked on harmful ARV drugs and condoms, and then the dealer makes money from that dependency. Financial institutions were not the only subjects of scorn of the dissenters. Duesberg argued that the World Health Organization might be inflating death rates in order to control the internal politics of sovereign African nations (29). The case was put most forcefully by Christian Fiala:

Through the AIDS discussion the industrialised countries have ensured themselves the right to determine the internal affairs of the developing countries such as budget distribution and assessment of health priorities. Those suffering from well-known infectious diseases are diagnosed as suffering from AIDS. Most scientific information about AIDS comes from Europe and the USA and developing countries are dependent upon it. In view of the shortage of resources it is not medically comprehensible why such funds should be spent on the documentation of HIV on the basis of unreliable tests and of AIDS on the basis of unsatisfactory definitions. Ultimately these funds are not then available for other areas (29-30).

The charges of deception even reach the point where hype and hysteria are instrumental in the actual transmission of the disease. “Dr. Giraldo recommended that the first point of entry for prevention was to stop the media-generated hysteria on AIDS. He argued that this hysteria and fear contributed to suppression of the immune system of people who were told that they are HIV-positive on the basis of unreliable tests and were doomed to die” (63). Here we see the strongest possible charge against the Western orthodoxy. Its propaganda actually causes the very conditions it claims to cure.

It is not surprising that the orthodox scientists did not share this distrust of the West as a political force. But they did hold an equally passionate cultural framework that informed their policy preferences. The epidemic psychology (see chapter 3) was in full force, and no less controlling of judgments over AIDS science than the geopolitics of the dissenters. Stefano M. Bertozzi spoke specifically about South Africa:

His experience had convinced him that sub-Saharan Africa is ‘on fire’ due to this epidemic. The nature of the problem was so urgent that emphasis had to be placed on

what could be done now to halt the spread of this epidemic. To Dr Bertozzi South Africa was like “a building that is burning and our first focus needs to be on getting people out of the building and putting out the fire. We will have time over the decades to come to debate the mechanisms of how the fire was started ”(64).

Rather than seeking to control South Africa, Bertozzi seems intent on saving it from the ravages of a disease that was certainly tragic in the West but never approached the numbers of deaths in Africa. Whether AIDS drugs are tools of oppression or violate homeopathic guidelines is immaterial in this context. An ongoing epidemic requires that we stop the dying first; national sovereignty is a secondary issue. These competing views of first/third world relations are complementary to the naturalism dispute in the preceding section. If one distrusts the motives of pharmaceutical companies, then it is not a daunting leap to also distrust the governments and institutions that support those companies. The panel has exposed these points in a way that the early technical writing of the AIDS dissenters never had. And once they have surfaced, we now have a new set of claims to evaluate when making decisions about AIDS policy. Naturalism or opposition to Western hegemony are the types of issues that are classically rhetorical, relying on argument and deliberation. Once one adopts a view of technological medicine as a political issue, then the evaluation of the scientific arguments for AIDS science becomes much clearer. Two worldviews, one opposed to techno-medicine and Western political dominance, the other yearning to apply medical solutions to what was perceived as a burning crisis, serve as foundations for both policy recommendations and the assessment of scientific evidence that justifies those policies.

4.5 CONCLUSION OF THE REPORT

The conclusion of the report gives us the final statement from the rapporteurs of just how the etiological disputes between the two sides affected the policy recommendations. The report itself acknowledges the deep split between the two sides, and points to the philosophical dispute as the lynchpin. “That primary split on aetiology generated consequential splits of views on the treatment and prevention of AIDS. The depth of the cleft on the aetiology of AIDS was such that the commonalities of views on health policy and public policy were by and large swallowed up” (107). Without common ground on the standards of proof, common ground on the policies is impossible.

Our reading of how that split emerged warrants several conclusions. First, the scientists were forced to specifically address issues of policy. As a result, the political and cultural foundations of their arguments came to light. Putting the scientists into direct clash with one another and having them address not only technical but political issues highlighted points of disagreement in a way that other formats would not. The standards of proof debates and the competing political visions of both sides are now open to critique from outside observers. From an analytical perspective, bringing out the hidden political elements of this scientific controversy is beneficial. The panel failed as a means to generate consensus around actionable policy recommendations. But it was a success in exposing the warrants behind those incommensurable positions.

That fact leads us to the second conclusion. The philosophical and evidentiary disputes between the two sides were undeniably linked to the political issues. The logic of AIDS policy works in a chain. One cannot determine which policy to adopt until one has resolved the technical questions of etiology and the efficacy of ARV drugs. And how one views the evidence

and reasoning brought to bear on those technical questions is greatly influenced by the judges' politics and their ideological commitments regarding the nature of medicine. Ideological visions influence the technical debates, which in turn influence the policy debates. Many of the theorists that were considered in this chapter note that the selection of criteria for the evaluation of policy relevant science is the product of cultural views and rhetoric. Dissenters reject AIDS science not merely because they hold a different standard of proof than the orthodoxy, but because they are politically predisposed to reject techno-medical drugs and are wary of Western control of Africa. Orthodox scientists hold the standards of proof that they do because they embrace medicine and feel a moral imperative to spare the continent the ravages of an epidemic they themselves have already experienced. In a science policy dispute, it is not enough merely to weigh the technical arguments as pure science. The milieu of the deliberations must be considered as well. Paying attention to those issues gives a more accurate reading of the arguments.

For those dedicated to the democratization of science, the previous two insights seem to force a third conclusion. Arguments in favor of public participation in science policy should not merely focus on the traditional issues of who gets to make policy decisions (Nelkin 1984) but the technical standards of proof in policy relevant science as well. Just as we have come to believe, especially for AIDS, that patients should have a voice in whether drugs are made available, so too must we involve those stakeholders in the philosophical debates themselves. Standard of proof debates are both fundamental to shaping eventual policy decisions and are often determined by the very sorts of political and moral factors in which non-scientists have expertise. The layperson may not be able to weigh the evidence of the certainty over ELISA AIDS tests as well as a credentialed scientist, but she can certainly determine whether or not to heighten scrutiny of pharmaceutical companies because of their business practices. The political elements

of crafting standards of proof in controversial science are rhetorical and involve cultural decisions that we routinely assign to the public in other areas of politics. They involve weighing non-technical arguments and applying ethical standards to government policies. As a result, deciding between scientific standards of proof is rhetorical and ethical, and is within the bounds of public deliberation.

As we transition to chapter five, this issue of public participation in the South African AIDS story will take center stage. We will consider the role of social movement pressure on President Mbeki to recant his position and offer drugs to his people. We will also close the book on the rhetorical history of AIDS in South Africa, including a surprising validation of Mbeki's arguments that may prolong the debate for some time.

5.0 CHAPTER FIVE

The dissemination of the findings of President Mbeki's Presidential AIDS Advisory Panel, not surprisingly, failed to resolve the issue of AIDS policy in South Africa. In fact, the report only inflamed tensions between Mbeki and his domestic opponents. His primary critics at home, the Treatment Action Campaign (TAC), greeted the report with condemnation and made further demands for access to anti-retroviral therapies. The TAC is the most high profile and politically successful social movement in the nascent history of post-apartheid South Africa. The TAC was so successful, actually, in terms of crafting arguments and selecting appropriate venues in which to make them, that the group was able to win historic victories in the South African courts as well as bring sufficient political pressure on President Mbeki to force a recantation of his AIDS dissent in 2003. This chapter will complete the analysis of this controversy by focusing on the arguments and tactics of the TAC. A dominant theme of the preceding chapters has been the rhetorical negotiation of standards of scientific proof in a policy controversy. While an examination of the TAC could easily constitute a dissertation unto itself, the following chapter will particularly focus on the movement's strategies to open up the policy making process to the voices of the infected.

The chapter will first set up the analysis by reviewing theories of argument in social movements and providing a brief history of the TAC. Then, it will proceed to three important

issues implicated in the clash between the movement and the President, namely the morality of access to AIDS treatments, the democratization of the policy making process, and competing theories of risk. Finally, we will analyze the successful tactics used by the TAC to gain concessions from the government. However, recent events will force a post-script to this policy controversy that had seemingly been closed.

5.1 STUDYING SOCIAL MOVEMENTS

While the literature on social movements is vast, one recurring theme is the need for strategic decision making and careful argumentation for success. Stewart, Smith, and Denton point out that social movements have a variety of approaches to political argument at their disposal, from antagonistic tactics to the conciliatory compromise (Stewart 1984). Choosing between them is a matter of strategy, and making the most persuasive choices are the primary means of change for social movements. Often these choices are the product of leaders juggling the fervor of their members for radical change versus the pressure coming from powerful opponents to change (Simons 1970).

One of the most powerful strategies for social movements is framing. Framing is a commonly noticed function of social movements, a technique for simplifying the “world out there,” making it more understandable (Snow 1992). Snow and Benford develop a theory of collective action frames, where social movements use framing techniques to highlight issues presently neglected and, important for our purposes, to assign blame to others for perpetuating those problems. An issue could be cast as a struggle between the rich and poor, for example. Framing a debate in such terms provides a foundation for public argumentation and rallying

recruits to the cause. A key in that process is the use of master frames that “perform the same function as movement-specific collective action frames, but they do so on a larger scale” (138). These broad, societal frames provide a starting point for generating arguments and make the arguments more understandable.

Framing is not the only strategic choice available to social movements. Robert Lauer chronicles three criteria that critics may use to distinguish between the strategies of social movements (Lauer 1976). The critic should determine who the agent of change is supposed to be (e.g., the government or the movement itself), examine how the movement balances persuasion with more violent action, and isolate what is targeted for change (individuals actions or entire social conditions, for example). This dissertation’s analysis will follow Lauer’s cue, with particular focus on how the TAC argues that the Mbeki government is the necessary agent for change and how providing drugs and improving socio-economic for South Africans intersect.

The study of social movements in a democracy often focuses on how pressure to change public policy is made by using popular appeals to jeopardize the reelection prospects of the current government (Burstein 1999). In this case, though, South Africa is essentially a one-party democracy. Even with Mbeki’s unpopular AIDS policies, the reelection of the ANC seems guaranteed into the near future. Without the ability to jeopardize the power base of Mbeki, social movements like the TAC must turn to other branches of government, such as the courts, for redress. They may also engage in civil disobedience aimed not at deposing the government but at shaming it into changing policy. Both of those strategies will factor heavily in this chapter. Given the power base of the ANC, it is likely that the TAC will have to turn to alternative forums to win policy changes.

5.2 THE TREATMENT ACTION CAMPAIGN

According to their website, the Treatment Action Campaign “was launched on 10 December 1998, International Human Rights Day. Its main objective is to campaign for greater access to HIV treatment for all South Africans, by raising public awareness and understanding about issues surrounding the availability, affordability and use of HIV treatments” (Treatment 2005). Its founder is Zackie Achmat, a veteran agitator against white minority rule who “was detained and imprisoned on more than five occasions as a youth activist” (Das 2004). After his underground work with the ANC, Achmat established the National Coalition for Gay and Lesbian Equality, involving him in AIDS advocacy early in the epidemic. HIV-positive himself, Achmat famously refused black market ARV treatments for four years while Mbeki was denying them to the nation’s poor.

As a social movement, the Treatment Action Campaign has been astonishingly successful. Steven Friedman and Shauna Mottiar (Friedman 2004) present an extensive examination of the history and influence of the TAC. Surprisingly though, given its famous antipathy to Mbeki’s policies, the original intent of the TAC was not to oppose the government, but to work with it against pharmaceutical companies in the fight over parallel importation. In chapter two, we saw how Mbeki himself at one point supported the aggressive procurement of ARV drugs. The ANC and the TAC briefly were allies in those early attempts to make AIDS treatments available. But, once Mbeki began to advocate dissent and impose restrictions on access to those treatments, the TAC turned toward opposing government policy. They employed a variety of tactics, as Friedman and Mottiar describe. “The organisation employs a multi-strategy approach to campaigning, and its methods range from civil disobedience—and, on several occasions, importing medication in contravention of patent law—and street

demonstrating through action in the courts . . . to measured pamphlets spelling out scientific arguments” (3). The demonstrations are certainly argumentative acts, communicating dissatisfaction with the government. But the TAC training and treatment programs are not merely informative. They too are political acts, communicating to the government that effective training people to use anti-retroviral drugs properly is possible and that the government should be engaged in it. Treatment literacy (as the TAC describes it), though, is not unique to the TAC. Many international organizations spread similar information. It is the movement’s other strategies for battling AIDS policies that are unique and have been more successful. Therefore, they will be the focus of the subsequent analysis.

Social movements, obviously, have a rich history in South Africa, a fact that both enables and constrains Achmat’s organization. Helen Schneider’s (Schneider 2002) analysis of the societal context of the TAC shows how tricky strategizing resistance in South Africa can be. She notes that the TAC, on the one hand, holds a typical allegiance with other AIDS social movements such as the American “AIDS Coalition to Unleash Power” (ACT-UP) that narrowly focus on treatment and discrimination issues surrounding those with HIV. However, the TAC is also aligned with prominent officials and groups who reject restrictive health care policies in general, not just about AIDS. These include figures such as the Congress of South African Trade Unions (COSATU) and Archbishop Desmond Tutu. The COSATU support is particularly important as they have influence in the ANC government like no other non-elected group, given the strong Marxist proclivities of early ANC ideology (Matisonn 2004). These allegiances have made the TAC a powerful actor not only on AIDS, but in the battle against poverty and injustice generally. To that end, the TAC has also aligned itself with other international non-governmental

organizations such as Medicines Sans Frontiers, OXFAM, and Ralph Nader's Consumer Project on Technology.

Strength in numbers is an essential aspect of social movement activity in South Africa, since that country remains shaped by the experiences of fighting apartheid. Resisting Mbeki there is a tough practice, since the ANC retains the mantle of racial liberators. The anti-apartheid movement serves as a "master frame" for social movements, a collective worldview that shapes the evaluation of public arguments. We have extensively chronicled how Mbeki invoked apartheid as a warrant for his views on AIDS. Steven Robins (Robins 2004) has recently discussed the success the TAC has had in avoiding the appearance of opposing President Mbeki and the ANC and of being labeled "anti-black" as a result. The solution was to continually defend its own positions as an extension of the anti-apartheid movement. Moreover, the way the TAC chose to frame its own arguments shows a continuity with the principles of the ANC when it was a social movement. The TAC needed creative ways to generate their arguments so as to both resist and co-operate with the government. We may look at three of these strategies to see these principles in operation.

5.3 MORALITY AND ACCESS TO AIDS DRUGS

Sometimes, forcing policy change from a government is a product of attracting numbers of people to the cause, with the teeming masses demonstrating popular support that cannot be ignored. The recent mass demonstrations over election results in the Ukraine are an example; millions in the streets forced policy changes. But as Steven Friedman and Shauna Mottiar (Friedman 2004) demonstrate, the TAC recognized that it could not win victories based on large

numbers. The ANC government was too popular. Rather, it engaged in the “politics of the moral high ground” (26). By casting access to medicine as not just a clinical public health issue but as one of ethics, the TAC forced the government to justify its policies morally. The TAC maintained that the government was not just wrong on the science but was blameworthy and shameful for denying treatment to the poor. In the TAC’s critiques of both Western pharmaceutical companies and the Mbeki government, “moral embarrassment played a significant role in winning the change in policy and practice” (27).

But as Friedman and Mottiar argue, once a movement seizes the moral high ground and relies on it as a primary argumentative strategy, consistency is necessary. Any contradictions or hypocrisies undermine the position irrevocably. “Since morality in this view is an indispensable strategic resource, it must become a permanent and indispensable element of the movement’s campaign, not a tactic to be used or discarded depending on circumstances—or used to appeal to some constituencies and not others” (28). Achmat’s refusal to take ARV drugs is an example of moral consistency. Supporting health care for all, not just the HIV positive, is another. Avoiding violent conflict with the government also serves that purpose.

Of course, the effectiveness of using morality as an argumentative strategy depends on what definition of morality will hold sway in the minds of observers. We have already seen that Mbeki has a developed and understandable moral view of AIDS policy that embraces cultural self-determination and tolerance of dissent (see chapter 2). There is little to support the view that Mbeki’s dissent, unlike American governmental intransigence to AIDS policy in the 1980s, comes from an antipathy toward or hatred of the infected. “It is relevant that even South African government ‘denialism’ seems to have recognised the need for moral empathy for people living with the virus because it did not seek to stigmatise them” (29). In this context, the morality of

treatment defended by the TAC is pitted against Mbeki's own moral vision. It is not morality versus evil or egoism. At stake in this debate are competing public conceptions of what moral health policy is.

At many places throughout the world, this debate was waged without a moral position on the part of the government even remotely as defensible as Mbeki's. When the Reagan government dragged its heels on AIDS funding and prevention, it did not do so in the interests of cultural self-determination; it did so because it refused to recognize a problem. Such morally bankrupt reactions to AIDS in the Western world produced a subsequent nearly global consensus that the moral high ground lay with access to AIDS treatments. And that global consensus provided rhetorical resources to the TAC in their public arguments against the South African government. The movement was able to isolate Mbeki internationally and make his arguments less likely to prevail.

Throughout much of the world, universal access to health care is not considered a moral imperative. For example, in the United States policy makers will routinely endorse aggressive access to ARV drugs and funding for AIDS research, yet deny such treatments to the poor for other diseases. The moral high ground is reserved for responses to certain diseases like AIDS, cancer, or pediatric illnesses. Friedman and Mottiar state that "it seems reasonable to assume, therefore, that the fact that denying treatment to people with AIDS has come to be seen by conservative as well as liberal or left world opinion as morally repugnant—a key source of pressure impelling the [Mbeki] government to concede the roll-out—can surely be attributed to the effectiveness of the moral campaign waged by a variety of organisations and movements, a campaign into which TAC effectively tapped" (29). Framing ARV drugs as a moral good provides argumentative resources to the TAC.

If AIDS treatment is a moral good, then if it denied, the question of where to assign blame arises. The problem is particularly challenging for the TAC, as it hopes to blame a popular government for its AIDS policies. Mbeki has a different agent to scrutinize; greedy imperialist pharmaceutical companies and their government allies in the West are to blame. On what grounds can the TAC assign blame to Mbeki? Some insight, from an American perspective, is provided by Jason Andrew Kaufman (Kaufman 1998). Few would deny that a government has the responsibility to provide treatment to individual AIDS patients when possible. But there is also a strong mentality of group rights associated with AIDS. According to Kaufman, AIDS health policy is not seen as just an issue of preventing epidemics. “The infected” are granted a moral status that is rewarded with positive rights to treatment. We give AIDS drugs to people not only because we want to stem an epidemic, but because their infection entitles them to those drugs. “The state’s responsibility to provide this care is framed *not* as an issue of the public’s health but in terms of AIDS patients’ right to care, a position that prioritizes the rights of neither individuals, nor society, but those of a specific *group* of people [emphasis in original]” (Kaufman 1998, 655). If treatment is a right as well as a moral good, then the government has a positive responsibility to ensure that right is not denied.

Governments often are charged with special responsibilities to fix problems such as AIDS. An examination of where “remedial responsibility” lies is offered by Christian Barry and Kate Raworth (Barry 2002). They isolate three criteria for assigning heightened responsibility to certain agents to remedy problems. The first is connectedness, where those closer to the affected having a stronger responsibility to act. The second is contribution, where those who have contributed to the problem have a stronger obligation to fix it. And finally, capacity is an issue; those with more means to solve the problem have a stronger imperative to act than those without.

Contribution is a major aspect of the TAC campaign, even prompting it to level charges of murder against specific government officials (see below). The government will counter with challenges to its capacity to implement ARV treatment without more study and resources.

This debate, as always, is highly influenced by South Africa's recent history. Government responsibility for providing drugs is particularly high there because health care policies were so skewed during apartheid. The parallel between apartheid and Mbeki's AIDS policies was put most famously by South African Justice Edwin Cameron, a white man who divulged his HIV status in a speech before a conference held by the TAC and Medicines Sans Frontiers in July 2000 (Cameron 2000). Justice Cameron argued that the peculiarities of South African history point to the need for universal health care as a moral priority. It was tyrannical when whites denied health care to blacks, and no less so when blacks deny it to blacks. Not only that, Cameron notes that active resistance to restrictive health care policies is ingrained in the people of South Africa.

Our history has taught us that we don't have to accept "inevitabilities." We don't have to accept what one leading lady from the United States in the seminar I attended yesterday called "a sad reality," that these medications are not accessible to Africa and the resource-poor world. We don't accept "sad realities" in South Africa. If we accepted what others told us were sad realities, we would still have had a racist oligarchy oppressing our people. We would have had indescribable chaos and bloodshed (3).

The argument is powerful, especially since it turns Mbeki's own logic on its head. Mbeki opposed ARV drugs in the spirit of the anti-apartheid struggle. Now Cameron, a white man, accuses the majority government of the same nefarious practices. Before Mbeki ever publicly

asserted that the legacy of apartheid justified AIDS dissent, Cameron had made the exact opposite conclusion. A moral battle was afoot, not only a scientific one.

In remarks made after Mbeki's letter of 2001, Cameron again lashed out at those who see AIDS as a Western conspiracy or otherwise find excuses to do nothing about the epidemic. Doing so embodies the values of apartheid. "They [dissenters] depict the facts about AIDS as a monstrous plot against Africans because they are black. In this the denial of AIDS represents the ultimate relic of apartheid's racially imposed consciousness, and the deniers achieve the ultimate victory of the apartheid mindset" (Cameron 2002). Casting health care policy in terms of race and abandoning science for conspiracy theories is the mentality of the racist. Justice Cameron is here articulating an early version of the arguments that would later be so successful for the TAC. By linking ARV drugs with morality, and with opposition to apartheid in particular, the TAC and its allies make a strong appeal to morality that contrasts with Mbeki's arguments.

5.4 DEMOCRATIZATION AND THE POLITICAL PROCESS

Another issue that influences the rhetorical exchanges between the TAC and the government are questions over the process of policy making. Much of this dissertation has considered whose views and interests should count in deliberative decision making over science controversies. The foremost commentator on AIDS policy in South Africa, Helen Schneider (Schneider 2002) analyzes this issue as well. For her, deciding who gets a voice in making AIDS policy is so important that she locates the genesis of Mbeki's AIDS dissent there. "While President Mbeki's statements questioning conventional views on the causes of AIDS may have seemed bizarre to many, these statements have a much clearer logic when seen as part of an ongoing struggle

between various players in South Africa” (145). She sees AIDS policy during the transition to majority rule as a battle between NGOs and the African National Congress over political control. Before Mandela formally came to power, a project called the Networking AIDS Community of South Africa (NACOSA) set a model for participation in the formation of AIDS policy in the country. That program gave NGOs a formal seat at the table for setting AIDS policy during the transition. These first forays into fighting the disease were highly participatory, “involving large numbers of people over several years, thus establishing an expectation of future participation in AIDS policy” (145). But once the ANC came to power under the new Constitution, Schneider maintains, the participatory nature of the new government was abandoned and power was centralized in the upper levels of the ANC.

An important example of this secrecy and centralization is, of all things, a dispute over theater. Sarafina II was commissioned by the ANC and the Ministry of Health as an instructional play on AIDS for the youth, and a 14 million Rand grant was awarded for its production. Questions arose concerning the amount of money spent and the openness of the contracting process. “Reactions concerned the apparent secrecy of the process and the amounts of money involved” (146). What should have been a minor affair became a full-blown scandal when the ANC attempted to strong-arm criticism of the project. Kenneth Good (Good 1997) argues that the government “steamrolled and manipulated parliamentarians in a successful attempt to protect its Minister [of Health]” (560). So widespread was the criticism of the government that Sarafina II became the subject of the first report of South Africa’s newly created “Public Protector,” an ombudsperson who investigates citizens’ concerns about the government. The report absolved the government of illegal activity, but criticized the secrecy of the grant process (Baqwa 1996).

The scandal, Schneider suggests, is indicative of how the new government ignored the voices of the people and NGOs in the country. A mentality of isolation arose surrounding policy formation. As a result, “a vicious cycle of growing alienation between key members of the state and non-governmental AIDS actors” (150) became the norm. Schneider sees Mbeki’s dissent as an attempt to negotiate who will count as a legitimate partner in policy formation. “High level state interventions in the AIDS field thus have less to do with the differences in the content of policy than with a discomfort, and at times active exclusions of, social movements that express certain styles of activism and that fall outside of the immediate networks of political patronage and influence” (153) within the government. In another article, Schneider and Stein make a related point (Schneider 2001). They claim that the problem with AIDS in Africa is not the lack of political will to implement policy, but too much political will to centralize authority over public health. “The real problem underlying AIDS implementation failure in South Africa appears to lie less in the *degree* of political concern than in the *quality* of this concern; less in the lack of political commitment than in the inappropriateness of more centralist and authoritarian styles of leadership in facilitating the response to AIDS” (728). While this dissertation has shown the answer to be more complicated than just a grab political power grab (Mbeki’s dissent is also a cultural response to scientific knowledge claims, not just *realpolitik*), Schneider’s recognition of the importance of participation in the policy making process for both sides is well taken.

Denied a voice in the ANC power structure after the fall of NACOSA, the TAC turned to alternative strategies to make arguments and gain access to public policy formation. While the instances of resistance were numerous, we will focus here on two strategies employed: recourse to the courts and civil disobedience. Friedman and Mottiar (Friedman 2004) discuss the TAC’s turn to the South African courts. The movement saw the courts as a “strategic resource” (18), as

a branch of government not directly under Mbeki's control yet potentially important in the public policy process. The TAC walked a fine line with this strategy. They were attempting to force the government's hand judicially to distribute AIDS medications. Yet, doing so could not alienate the government to the point where, should the TAC prevail, the government would resist further cooperation.

In "ANC Today," an on-line newsletter presenting official communications from the party, the government attacked the TAC judicial strategy on the grounds that complying with their legal requests wasted the time and resources of the AIDS unit of the government. But the ANC also questioned the tactic of going to the courts strategically. They ask, "How does this academic exercise contribute in building the united national response required to address a major challenge like HIV and AIDS?" (African 2004). Unification in this context means getting behind government policy. But the TAC argued that those policies were formed in an undemocratic fashion and required more participation to be considered legitimate. As a matter of public argument, determining whether the TAC suits are fractious or democratizing was a major concern.

These strategic considerations also manifest in the TAC's second noteworthy rhetorical tactic, civil disobedience. In 2003, the Mbeki government failed to sign on to the National Economic Development and Labour Council's (NEDLAC) AIDS treatment plan, which included programs for ARV drug access. The TAC decided to initiate a disobedience campaign. The decision to use civil disobedience was a difficult one, as such tactics are almost never used against a very popular government. The TAC's choice to engage in civil disobedience was rhetorically precarious, risking backlash from the people and even more resistance from the government. No matter how many court cases they won, the TAC could not themselves

implement a drug program; the government had to be a willing partner if drugs were to be made available. Finding the right balance between conflict and co-operation is a challenge all social movements face. The TAC attempted to bridge this gap, even when engaged in civil disobedience, by continually making their arguments in terms of opening up access to the decision making process and providing adequate health care for everyone.

The TAC could easily have begun a campaign for regime change. But instead, TAC was able to both raise public awareness of the issue and still hold open the possibility of reconciliation with the government. Friedman and Mottiar conclude that:

TAC's mode of engagement with government, in which co-operation and conflict are, in a sense, deeply intertwined, is not simply a strategy born of convenience. It does reflect an approach which recognises that democratic governments, while they enjoy access to power which could be used against the grassroots, are also elected by the majority of voters and cannot simply be dismissed as enemies of the people" (24).

The campaign was not only a local affair. On April 23, 2003, the TAC called for an "International Day of Action," where activists around the world laid empty pairs of shoes before South African embassies symbolizing the deaths due to government negligence. The protests were always reserved, somber, avoiding actions that would burn too many bridges with the ANC.

These two strategic choices, making AIDS policy an issue of morality and using argumentative strategies focused on democratizing the policy making process laid the foundation for the specific arguments of the TAC. One final issue between the two sides would further influence that rhetoric.

5.5 RISK

This dissertation has analyzed in several different contexts competing conceptions of the costs and benefits of providing ARV drugs in the treatment of AIDS. This chapter gives us the opportunity to examine this issue between policy makers and patients as well. In South Africa, disagreements over the efficacy of ARV drugs can be viewed as contrasting conceptions of how risk should be conceived in science policy.

Judith Bradbury (Bradbury 1989) discusses competing conceptions of risk in science policy. She sees risk as a social calculation, as opposed to the mathematical likelihood of an adverse event. Not just a statistical probability of something bad happening, a cultural view of risk is a product of the experiences and worldviews of all stakeholders. “Cultural scholars start from the premise that risk and technology are social processes rather than physical entities that exist independently of the humans who assess and experience them” (389). Seeing risk this way opens the door to recognizing the importance of the individual in policy calculations. “From this viewpoint, acceptance and acceptability of risk cannot be analytically determined but must be negotiated, that is, socially constructed” (391). Assigning risk is a collaborative act, requiring participation and communication to settle. Any rhetoric of science policy making should pay particular attention to the ways that risk is constructed socially in a controversy.

A very rich examination of how social factors and a lack of certainty affect our perceptions of risk surrounding AIDS specifically is offered by Chris Bennett (Bennett 1996). He agrees with Bradbury that risk at times of uncertainty is never a wholly logical calculation, that “decisions are likely to be influenced in different and complex ways by individuals’ perceptions and the social and institutional contexts within which the hazard has arisen” (149).

That insight might be banal to committed rhetoricians of science, but we should remember that Mbeki's Presidential AIDS Advisory Panel (see chapter 4) was tasked with weighing the risks and benefits of ARV drug treatment programs from a technocratic perspective. The voices of the infected were not represented, only the views of credentialed scientists. At the very least, Mbeki did not seem to grasp that point, much to the consternation of the TAC.

Forming science policy at times of uncertainty, Bennett maintains, spills over into political debates above and beyond the immediate controversy. "Decision making about such questions clearly involves risky choices. However, many are not just practical or moral dilemmas but have potential to become highly political issues with ramifications far beyond the field of health care" (150). He sees this process at play specifically in the history of AIDS policy. Bennett cites Strong's "epidemic psychology" (see chapter 2) that took root when AIDS first started spreading. That psychology fundamentally affected the perception of risk in the West. Arriving at consensus about AIDS policy requires a negotiation over the different personal conceptions of risk that arise. The resolution to such a controversy cannot come simply from data gathering, but requires exchanges of views and arguments. Simply "knowing more" about the disease will not bring closure to the controversy. When it comes to AIDS, "information is by no means the only, or even necessarily the most, important influence on decision making. In addition, it [Bennett's study] suggests that where the available information is perceived as inadequate or untrustworthy the influence of other factors may even be more marked" (160). Both information and collaboration with patients is necessary to address the entire issue of risk.

Not surprisingly the efficacy of participation oriented approaches to AIDS is also recognized in public health message research. For example, Ford, Odalla and Chorlton (Ford 2003) defend a "human rights perspective" to health communication about AIDS. They critique

models of communication that assume patients or lay observers, especially those in less developed countries, are passive and ignorant recipients of health messages. Only by creating feelings of ownership and participation among the patients can public health messages be received positively and acted on.

Defining how risky AIDS drugs are was clearly an issue in the rhetorical exchanges between the TAC and the South African government. Both sides had their own views about what a moral stance toward ARV drugs was, and both had their own views of the acceptable level of public participation in the policy making process. These arguments had to be developed by the TAC within the contextual constraints of simultaneously opposing government policy but requiring their assistance to change. By framing access to ARV drugs as a moral issue and making claims to increased democratization in the spirit of the ANC's own struggle against restrictive apartheid, the TAC carefully chose an argumentative strategy they hoped would seize the moral high ground. And if success is measured in terms of changing policy and minds, then successful they were. We turn now to their two greatest victories.

5.6 THE TAC TAKES MBEKI TO COURT

Probably the most renowned victory of the TAC was a 2002 court decision mandating that the government provide ARV therapy to prevent mother-to-child transmission of HIV. The drug in dispute was Nevirapine, one of three anti-retroviral drugs commonly prescribed in the AIDS cocktail. Nevirapine, though, can be delivered in single doses to the mother right before birth and then to the infant directly after birth. This so-called "Nevirapine monotherapy" is only effective for preventing transmission of HIV between mother and child. It is also far cheaper

than long-term doses of the triple-therapy cocktail. One of the significant disadvantages of monotherapy is the potential that mother or child will develop resistance to the drug that will inhibit subsequent triple-therapy (cocktail) treatments. Prior to the court case, the government had restricted monotherapy to selected pilot programs in largely affluent provinces of South Africa, ostensibly in the interests of full research. The TAC sued the government to force the expansion of the pilot programs to all public health clinics in the country.

Legal scholars have given the case much attention as one that overtly addresses the policy relevance of challenges to the HIV theory and to the efficacy of anti-retroviral treatments (Fitzpatrick 2003). But also, the case is noteworthy because of the peculiar construction of the South African Constitution, ratified in 1994. Margit Tveiten (Tveiten 2003) notes that the document was designed to make a fundamental break with the old regime (see chapter 1). That transcendence was accomplished by the explicit codification of socio-economic rights in the post-apartheid Constitution, including access to health care. In many ways, the South African Constitution is the most aggressive establishment of positive rights on the planet. Recent South African case law has interpreted the provisions as an obligation on the part of the government to provide equal access to health care for all (Joni 2002). In this Constitutional context, the issue of who has moral access to health care is forced on the participants by legal precedent. Health care is a right that the government has a responsibility to provide. That framework allowed the TAC to sidestep the Mbeki controlled Parliament and take their fight to a much friendlier court system (Berger 2002).

The opinion of the court (*Minister of Health v. Treatment Action Campaign* 2002) examines the moral and scientific issues surrounding South African AIDS policy from this legal perspective. In its judgment, the court dismisses the government's arguments against the efficacy

and safety of single-dose Nevirapine and orders that it be made available. Since the decision directly deals with moral constraints on science policy decisions, the right of South Africans to have access to health care, and competing conceptions of risk between the government and the TAC, we will closely consider the Court's findings as an evaluation of the arguments by both sides.

The Court found that two policy issues were salient to the case (para 4-5⁹): first, whether the government policy of restricting access to Nevirapine only to the public clinics involved in the pilot study was constitutional; second, whether the government is required by the Constitution to implement a comprehensive plan for the prevention of mother-to-child transmission of HIV. To answer these questions, the Court first had to determine what the limits of the right to health care guaranteed by the South African Constitution are. "The question [became] whether the applicants have shown that the measures adopted by the government to provide access to health care services for HIV-positive mothers and their newborn babies fall short of its obligations under the Constitution" (25). The Court first brushes aside arguments about feasibility. The Court is clear that it finds Nevirapine monotherapy to be cheap, easy to administer, and to require little or no training. It rejects out of hand arguments that a comprehensive monotherapy program would be too costly or cumbersome to implement (49).

Among other issues discussed by the Court, of particular concern was whether the government's position that more study was necessary before expanding Nevirapine therapy beyond the pilot project sites was an acceptable risk. From the very beginning, the government had used these concerns as warrant for the limited program of ARV access to pregnant women and newborns. "When the TAC in September 1999 pressed for acceleration of the government programme for the prevention of intrapartum mother-to-child transmission of HIV, it was told by

⁹ Sections of the Court's judgment will be referenced by paragraph numbers.

the Minister that this could not be done because there were concerns about, among other things, the safety and efficacy of Nevirapine” (10). Individual demands for drugs were checked by the government’s concern over the risks associated with those drugs. In an August 6, 2001 reassertion of this position, the Minister of Health sent a letter to the TAC that once again “details a series of governmental concerns regarding the safety and efficacy of nevirapine [sic] requiring continuation of government’s research programme” (11). At the same time, the Court notes, drug regulation bodies like South Africa’s Medicines Control Council (MCC) and groups such as the World Health Organization had been making the exact opposite judgment concerning Nevirapine, recommending it for use. The Court notes “registration of a drug [by the MCC] entails a positive finding as to its quality, safety and efficacy” (12). While the ANC government wanted more study of risk, other health organizations were already convinced.

The court is not entirely unsympathetic to the government’s desire for research. “It can be accepted that an important reason for this decision was that government wanted to develop and monitor its human and material resources nationwide for the delivery of a comprehensive package of testing and counseling” (15). But that desire on its own is not enough to warrant delay. “The crux of the problem, however, lies elsewhere; what is to happen to those mothers and their babies who cannot afford access to private health care and do not have access to the research and training sites?” (17). By the Court’s reasoning, the effect on patients of denying access to drugs must be a part of the calculation. We may remind ourselves of the analysis in this dissertation’s chapter four. During the deliberations of the Presidential AIDS Advisory Panel, standard of proof debates were largely about philosophies of science divorced from the material consequences of action or inaction. It was only after that panel directly addressed what policies to recommend the theories of science emerged that took these consequences to heart. By

focusing on policies as actions with consequences, the interests of the infected altered the debates over standards of scientific proof and new answers to the epistemological answers arose. The Court here echoes that concern and signals its intent to evaluate the government's calls for more study in light of the interests of patients, not against some abstract and potentially outdated epistemological criteria. At that point the Court evaluates those arguments one by one.

"In substance four reasons were advanced in the affidavits for confining the administration of nevirapine to the research and training sites" (51). The first was whether monotherapy is effective. Second, was a fear that resistance might be developed from use of the drug. Third was the potentially toxic effects of the drug. Fourth was whether the public health system in South Africa had the capacity to implement a comprehensive plan. The Court had already argued that resources existed to implement a monotherapy regiment, and so hardly dealt with the fourth issue.

On efficacy, the Court was unequivocal. Nevirapine is effective in preventing mother-to-child transmission. "It is clear from the evidence that the provision of nevirapine [sic] will save the lives of a significant number of infants even if it is administered without the full package and support services that are available at the research and training sites" (57). Indeed, the government made no real challenge to this issue. They were not asking to study whether monotherapy works, but whether its potential costs outweigh the benefits. That leads us to consideration of the two other issues.

A more contentious issue was the prospect of resistance to further ARV therapies if single dose Nevirapine is used at birth. The Court found that whatever risk there was from monotherapy was outweighed by the reductions in HIV transmission that are provided. To the Justices, weighing the arguments was easy. "At most there is a possibility of such resistance

persisting, and although this possibility cannot be excluded, its weight is small in comparison with the potential benefits of providing a single tablet of nevirapine to the mother and a few drops to her baby at the time of birth. The prospects of the child surviving if infected are so slim and the nature of the suffering so grave that the risk of some resistance manifesting at some time in the future is well worth running” (59). When put this way, the issue does seem easy to resolve. It is the same reasoning that American AIDS activists used to demand access to experimental and potentially toxic therapies on the assumption that without them they would die anyway. The risk of developing resistance is found to be less than the consequences of inaction. At the very least, the Court is inclined to give mothers the option to take the drugs, rather than have that decision prescribed for them by the government.

It is the issue of safety that occupies most of the Court’s time and where it makes its most lengthy assessments of AIDS science. Once again, its reasoning is unequivocal. “The evidence shows that safety is no more than a hypothetical issue” (60). Single doses of Nevirapine will not harm mother or child. The consensus of the medical community is enough in the Court’s eyes. “According to the current medical consensus, there is no reason to fear any harm from this particular administration of nevirapine. That is why its use is recommended without qualification for this purpose by the World Health Organization” (60). Of course, we have seen earlier in this dissertation that this consensus on the safety of ARV drugs is not unanimous. Dissenters use etiological challenges to justify questions about the safety of monotherapy from the assumption that the connection between HIV and AIDS is a myth. If that were the case, then the drugs are not safe at all, but are actually causing AIDS. But the Court is confident in siding with the orthodox consensus as represented by the WHO and MCC. The collected wisdom of *almost all* scientists is enough to act on.

The consequences of the Court's judgment was that, even where doubts persist on the scientific issues surrounding a drug like Nevirapine, you can still implement policy while waiting for further data. Research is important, they grant. "This does not mean, however, that until the best programme has been formulated and the necessary funds and infrastructure provided for the implementation of that programme, nevirapine must be withheld from mothers and children who do not have access to the research and training sites. Nor can it reasonably be withheld until medical research has been completed" (68). That decision is reinforced, as we noted earlier, by the South African Constitution's post-apartheid edicts to deliver health care as a positive right, a requirement that will trump endless speculation on the safety of a drug. The poor in particular have that right, since they are dependent on the government for health care. The pilot programs were not widespread enough to meet the government's Constitutional burden. The Court quotes itself from another decision: "A programme for the realisation of socio-economic rights must 'be balanced and flexible and make appropriate provision for attention to . . . crises and to short, medium and long term needs. A programme that excludes a significant segment of society cannot be said to be reasonable'" (68). Since the poor are denied access to the drugs, "there is a difference in the positions of those who can afford to pay for services and those who cannot. State policy must take account of these differences" (70). Another group of stakeholders that holds special claims to health care is children. The Court argues that monotherapy is "as far as children are concerned, essential. Their needs are 'most urgent' and their inability to have access to nevirapine profoundly affects their ability to enjoy all rights to which they are entitled. Their rights are 'most in peril' as a result of the policy that has been adopted and are most affected by a rigid and inflexible policy that excludes them from having access to nevirapine" (78).

Introducing issues of poverty and vulnerability highlights the moral nature of this debate. The TAC based their legal case on an ethical imperative to provide access to AIDS treatment. When the government challenged the safety of those treatments, the interests of those morally entitled and vulnerable patients carried a higher moral weight than the government's insistence on further study. In this argumentative context, the TAC was able to deploy arguments that had been dismissed within the closed decision making apparatus of Mbeki's Cabinet, where uncertainty over the etiology of AIDS made further study a moral good worthy of pursuit. By framing its arguments carefully and exploiting the available argumentative resources afforded by the South African Constitution (one, ironically, that Mbeki helped draft), the TAC was able to carry the day.

5.7 MBEKI RECANTS

The victory in court was no guarantee that the government would implement its expanded treatment plan. In fact, in the eyes of most critics, the government essentially ignored the court order and never distributed the drugs. But at other levels, following its loss in court, the government seemingly made concessions to the TAC. In a meeting with the TAC, Deputy President Jacob Zuma acknowledged that the ANC government should take a leading role in the campaign to make ARV drugs available (Treatment 2002). In a similar vein, the government included HIV and AIDS prevention as one of the issues to be featured in its "16 Days of Activism for No Violence Against Women and Children" in 2003 (African 2003). But as time passed, it became increasingly clear that the government had no intention of aggressively implementing the court order on monotherapy.

In March of 2003, the TAC faced a dilemma. Elections were impending, and the government continued to drag its heels on the Nevirapine “roll-out.” The campaign had to be ratcheted up. But the old question of how to oppose the ANC loomed given its monumental popularity loomed. After deliberation, the TAC decided to engage in a limited plan of civil disobedience, beginning on Human Rights Day in South Africa (Stoppard 2003). The plan had several strategic nuances. One was that throughout the entire process, the TAC took pains to limit their argument simply to the point that the government should fulfill its Court ordered responsibilities; the TAC would not oppose the government wholesale. In an interview with South Africa’s Financial Mail newspaper, Achmat was asked:

[Q:] By embarking on a civil disobedience campaign you follow in the tradition of the ANC and the UDF. Is it your intention to politically embarrass government?

[A:] Yes. We wish to make government officials feel very uncomfortable for failing to stop 600 HIV/Aids deaths every day.

[Q:] Is the TAC antigovernment?

[A:] The TAC supports the efforts of government to reconstruct and develop SA, to eradicate poverty and create equality. It is because we support this agenda that we demand an end to political denial about HIV. All our actions are an affirmation of the rights we won under our new constitution. We supported government’s [sic] court case against the pharmaceutical industry (Bisseker 2003).

Only select members and agencies of the government were targeted, especially Health Minister Manto Thsababala-Msimang. For example, Achmat interrupted a speech by the Minister before a national health conference with shouts of “murderer!” (Thompson 2003). In another act of protest, “hundreds of Aids [sic] activists gathered illegally and marched into South African

police stations yesterday . . . chanting, singing and waving banners, [where] they laid accusations of manslaughter against two cabinet ministers” (Carroll 2003). Although the trespassing was illegal, South African law does allow for private citizens to bring criminal charges. The TAC’s approach was less confrontational than it could have been. Such techniques focused on specific individuals, and not the government as a whole. At all turns, the TAC appealed to the morality of access to drugs, accusing those individuals of complicity in deaths. Being “too radical” would undercut their moral legitimacy since Mbeki maintained widespread popularity. The TAC suspended the campaign after a short while, giving the government time to respond (Agence 2003).

The campaign, seemingly, was enough. In August 2003, the Cabinet of South Africa announced substantive measures to increase the fight against HIV and AIDS. Even though the ANC spun the decision as consistent with previous government policy (African 2003), the move was actually a complete reversal and was greeted with enthusiasm. The report that heralded the change was produced by the National Department of Health Officials and the National Treasury (Joint 2003). That report, unlike any other document produced by Mbeki’s administration, is a strong defense of the efficacy and affordability of ARV drugs to date distributed by the South African government. Not only does it note that many of the uncertainties surrounding the use of ARVs had been resolved over the past few years, but the report explicitly acknowledges the subject position of the infected in ways that Mbeki’s rhetoric rarely, if ever, had. The report states: “As stated earlier, given the costs and complexities of ART [anti-retroviral therapy], a decision to provide such treatment is one about weighing the risks and benefits with regard to patients already in a desperate state of illness, and even more critically, it should be a matter of

informed choice on the part of the patients” (80). That was exactly the TAC’s argument during the civil disobedience campaign. Mbeki’s government was now on board.

TAC’s civil disobedience campaign was about democratization of the policy making process and the morality of ARV drug access. Strategically limiting their advocacy to those principles took Mbeki’s arguments about cultural self-determination off the table. After all, it was the government’s position that study was needed in the interests of protecting the poor and vulnerable. By making defiance of the South African Constitutional Court an act that was hurting those same people, the TAC found a rhetorical strategy that Mbeki could not reject as racist or colonial. Armed with the new ARV program and a TAC agreement not to make AIDS a campaign issue (Treatment 2004), the ANC increased their parliamentary majority in elections the following April.

But had Mbeki really changed his mind? Pinning that down is no easy task. Mixed messages issued from the government both in the immediate run-up to the April 2004 elections and after. After acknowledging the Zuma meeting mentioned earlier, the Financial Mail also remarked that “further evidence seemed to indicate a hollow reversal. In February 2004, the government announced a two-thirds cut in South Africa’s AIDS budget, from R296m to R90m, a move the TAC described as ‘completely unjustifiable neglect’” (Innocenti 2004). In September 2004, Mbeki quoted at length from a speech delivered before Parliament by Rian Milan, a writer who argues that AIDS is a secondary issue in Africa compared to other problems such as poverty (Barnett 2004). The following November, Mbeki showed flashes of his old self when asked by a white Parliamentarian whether he would take a stronger role in fighting AIDS. Mbeki responded by listing a series of African stereotypes that he would have no hand in promulgating, including characterizations of Africans as “lazy, liars, foul-smelling, diseased, corrupt, violent, amoral,

sexually depraved, animalistic, savage and rapist” (Cohen 2004). At least Mbeki personally seemed to still equate addressing AIDS with complicity in colonialism and opposed to African self determination.

At the same time, some of Mbeki’s surrogates in the government had been embracing ARV treatments. In an interview with the United Nations, Nomonde Xundu, head of South Africa’s HIV/AIDS Unit was asked, “Q: What are your impressions on the efficacy of ARVs? A: We know there is scientific evidence, and are convinced of the efficacy and impact of using these drugs . . . [after use] people go back to work, feel better, they are more productive and the economy improves” (UN 2005). For a time, monotherapy was being used throughout the country. There, at least, the battle had been won. While the triple-therapy AIDS cocktail, the Western gold standard, was not available due to cost in South Africa or anywhere else in the continent, the half loaf option of single dose Nevirapine seemed to have carried the day through the summer of 2004.

The TAC’s victory was one of carefully crafting arguments and choosing contexts of debate well. They exploited a global belief in the morality of access to AIDS treatments and injected into the debate the material consequences for patients of government policies. They used the legacy of apartheid in South Africa to make arguments demanding participation in science policy making. Rather than let the government define the risk of ARV treatments in terms of potential development of drug resistance, the TAC appealed to the interests of the infected to reframe the debate.

By utilizing the courts and South Africa’s unique Constitution, the TAC was able to invoke criteria for arguments that favored their own appeals to morality and access. Mbeki wanted the debate resolved in scientific panels and Cabinet meetings. The TAC wanted it

resolved in friendly courts and later in the court of public opinion. In the fluid context of rhetorical engagement, the TAC made the right choices and became one of the most successful social movements in recent memory.

5.8 POSTSCRIPT: NEVIRAPINE AND THE NIH

Subsequent events, though, would expose how fragile that victory was. Whatever consensus might have been reached on the question of ARV drugs in 2004 was seriously challenged by a scandal over research protocols in the United States. In July of that year, the MCC announced that it was no longer allowing Nevirapine monotherapy (LaFraniere 2004), the very drug treatment to which the TAC lawsuit had opened the door in 2002 and of which civil disobedience had won the implementation in 2003. The reason for the change was the revelation by National Institute of Health researcher Jonathan Fishbein that studies of the drug's safety conducted in Uganda by the NIH had violated federal patient safety rules and omitted data.

It was already suspected that monotherapy increased resistance to further ARV treatments. But the NIH failed to record information corroborating this fact in their study that otherwise defended single dose Nevirapine in Africa. Even though monotherapy treatment was by that time being extensively used throughout the country to prevent mother-to-child transmission (Timberg 2004), the MCC prohibited its further use after the scandal broke. The response from the TAC and other orthodox scientists was predictable given what had been seen previously. Lambasting the government for inaction in the face of an epidemic and accusing them of complicity in increased HIV infection rates and deaths was the order of the day.

Of special concern was the message communicated by the MCC's policy changes regarding pregnant women. Harvard Professor and AIDS activist Richard Marlink was quoted as saying, "In those rural places, women coming into labor will not use it now. We're saving a whole lot of lives with a single dose. Yes, you should add AZT or other drugs if you have it. But how many places is that?" (Donnelly 2004). One South African AIDS researcher agreed, saying "We mustn't jeopardize children's lives by not using nevirapine when we have no other option . . . I don't think women should be without any intervention while we're looking for that magic bullet" (Donnelly 2004). Achmat himself echoed those sentiments in an interview with the Financial Times (Griffith 2005). The choice to eliminate monotherapy was also critiqued as being the wrong choice in response to the NIH scandal. Indeed, as the Financial Mail argued, the response to the uncertainty over monotherapy could just as easily have been a move to double or triple therapy (the kind that is standard care in the Western world through the AIDS cocktail) rather than the prohibition of monotherapy (Bisseker 2004). That, however, involves substantial resource outlays that are unlikely to be within the reach of most African governments.

Did the scandal validate Mbeki's dissent? The dispute must be read in the light of post-colonial scientific relations between Africa and the West. Medical research is a classic site for these disputes. Lawrence O. Gostin (Gostin 2003) outlines an ethical dilemma in specific relation to ARV drug regimens. Research has demonstrated that in poor countries, short course treatments (like monotherapy, a one time dosage) can improve health and curb infection. But in the United States and other wealthy nations, such treatments would be unethical because they represent care below the standards of long-term therapy. If better medicines are available, Westerners are entitled to them. In clinical trials as well, giving the infected short course treatments, to study their effectiveness would be unethical. But absent a massive infusion of aid

into Africa, the continent is essentially forced into choosing between substandard short course treatments or having no drugs at all. Is it ethical to conduct a trial that would be unethical in the United States in Uganda if the techniques being studied are the only ones that Uganda could implement? It is a frustrating dilemma for public health officials. And it appears to have got the better of the NIH affiliated researchers. They let their belief in the need for monotherapy and their investment in the epidemic psychology, lead them to omitting data from their study, a move that only fueled the anti-colonial arguments of the dissenters.

The government's online journal "ANC Today" published an unsigned article blasting the United States for its role in the scandal. According to the Guardian, the report was believed by many to have been written by Mbeki himself (Meldrum 2004). Nevertheless, in the article (African 2004) the old themes of Western imperialism and mistrust of the scientific establishment reemerge with a vengeance. And this time, the TAC, Mbeki's most formidable domestic nemesis, is also in the crosshairs. The article quotes extensively from the Associated Press coverage of the NIH scandal, reporting that has been critiqued for failing to explicate the difference between mono and triple therapy efficacy (McNeil 2004). The author does not just indict a few fraudulent scientists, but claims a conspiracy that goes all the way down and that seeks to control and poison Africans.

This tells the deeply disturbing and frightening story that 'top' U.S. government officials were ready to hide from 'African countries looking for U.S. guidance on the drug,' the adverse effect of nevirapine that they knew very well, and which they were certain would oblige the FDA to reject the licence [*sic*] application of the drug maker. In other words they entered into a conspiracy with a pharmaceutical company to tell lies to promote the

sales of nevirapine in Africa, with absolutely no consideration of the health impact of those lies on the lives of millions of Africans (5).

This confluence of capitalism and colonialism critiqued by Mbeki some four years ago is now back, armed with new revelations to support it. The true interests of the infected lie in political resistance, not treatment.

The initial decision by the ANC to hold back on Nevirapine monotherapy now seems to the article's author careful deliberation. The slow roll out of pilot programs was justified to gather data that, it now seems, was being hidden by the nefarious Western researchers. "This necessary investigative work, targeted at ensuring that our public health system did not further compromise the health of our people, especially the poor who depend exclusively on the public health system, had come to a stop, because essentially the Constitutional Court ruled that there should be a general 'roll-out' in terms of the availability of nevirapine" (5). Now, helping the poor is presented as protecting them from the Western conspiracy. The view of risk has shifted, morality is a matter of caution and study, and the South African government is the one that should be trusted.

Africa is the last thing on the mind of the ostensibly beneficent Western AIDS establishment, this author concludes.

Clearly what was important for Dr. Tramont was not the health of the African people, but the success of President Bush's visit to our continent, during which he would market nevirapine to convince all of us that he is concerned about our health, not knowing that the US state medical research authorities had kept him ignorant about the serious concerns relating to the use of nevirapine. In other words, Dr. Tramont was happy that

the peoples of Africa should be used as guinea pigs, given a drug he knew very well should not be prescribed (7).

The argument is made plausible by the South African experience with the pharmaceutical industry (see chapter 2) and the entire continent's experience with Western AIDS research (see chapter 1).

But not just America, the TAC itself is now described as part of the problem. "It [TAC] is determined to continue to pursue its mission to promote the widest possible use of anti-retroviral drugs in our country, at all costs. In this regard, despite the fact that it is a mere NGO, and not a body of suitably qualified scientists, it is quite ready to deny the reality of established scientific truths" (7). TAC demands for participation are both unwarranted (they are a mere NGO, not credible like the dissenting scientists that the government cites and consults) and driven by an unscientific obsession with discredited drugs like Nevirapine. Why the monomania over ARV treatments? Profit and power answers the author. "And so, to guarantee and improve the sale of anti-retroviral drugs, this being the central mission of the treatment campaign of the Treatment Action Campaign, the TAC boldly proclaims that is a Scientific Institute that is capable of improving the quality of scientific reporting in our country, and undoubtedly especially 'scientific reporting' about nevirapine and other anti-retroviral drugs!" (9). And further: "But to make doubly sure that it achieves its objective of marketing anti-retroviral drugs at all costs, the TAC also pledges to position itself as the central adjudicator of what should appear in our mass media as quality science reporting! And the quality science reporting it seeks should be such that it does not unnecessarily 'undermine public confidence in nevirapine'. Naturally!" (9). The debate has returned to the beginning.

AIDS is now cast once again as a cultural struggle. And despite the advancements of the TAC in changing policy Mbeki and his government still operate from a set of assumptions that are deeply ingrained. They are also not wrong *prima facie*. The NIH *did* violate protocols. Pharmaceutical companies *do* seek large profits from AIDS drugs. The TAC, as well, has strong arguments. Risk is different on your death bed. Part of the anti-apartheid movement was a strong commitment to the democratization of the policy making process and providing access to health care to all. Even if policy is changed, these background assumptions controlling the evaluation of scientific and political arguments on both sides remain. To know the controversy, one must know these assumptions; and rhetors must account for them if their rhetoric is to be persuasive.

And so the debate continues. In April 2005, the Institute of Medicine released its review of the research scandal (Committee 2005). It concluded that while parts of the study were flawed, the conclusions regarding the safety of monotherapy were sound and the drug should be used in Africa (Bor 2005). Activists immediately hailed the report as vindication for their drug policies. “The Elizabeth Glaser Pediatric AIDS Foundation . . . hailed the report’s findings, saying those who have and are taking the drug in single doses can now be sure it is safe” (Solomon 2005). However, the whistleblower Dr. Fishbein urged that the report be taken with a grain of salt, since the review was requested by the NIH itself (Smith 2005). What will come next, like all other points in this expansive controversy, will perplex some, enrage others, but in any case require new rhetoric to mediate. In the final chapter, we will synthesize the lessons learned in this dissertation and consider its place within the field.

6.0 CHAPTER SIX

In this final chapter, we will review the previous analysis of the South African AIDS controversy and discuss some implications of those findings for the scholarly field of the rhetoric of science. Each chapter of this dissertation has focused on the rhetoric of a different actor in the case, utilizing theory where appropriate to guide that explication. An overarching issue, though, was the question of how contextual constraints shape the rhetorical resolution of science policy controversies. These constraints include a series of historical and cultural divisions between the West and Africa. The rhetoric of this case was also largely influenced by differing political and ethical commitments that produced varying standards of proof among scientists, politicians, and the infected. Working within these constraints forced strategic choices on the part of each of the actors. The dissertation was able to critique that rhetoric by focusing on those choices.

6.1 DISSERTATION REVIEW

In Chapter One, the context of South Africa was the primary subject. By examining insights from post-colonial and afrocentric theories of communication we guarded against hasty reactions to Mbeki's arguments as backward or inherently anti-intellectual. Scientific arguments, because of the strong bias they enjoy in Western countries, are particularly prone to such judgments.

Using a critical method that explores rhetoric as the product of strategic attempts to overcome contextual constraints, the dissertation embarked on its examination of the controversy.

No rhetor was able to escape the shadow of apartheid in South Africa. The need to make a clean cultural break with the previous regime was a constant theme of our analysis. The African historical of racist scientific practices in AIDS research conducted by Western scientists and corporations was also seen as an ever-present constraint on the generation of public arguments. It became clear that a natural and understandable mistrust of Western motives influenced Mbeki and his allies. Combine that mistrust with the effects of the epidemic itself, and the peculiar context in which AIDS dissent flourished in South Africa became clear. The debate between Mbeki and the orthodoxy was never whether or not something needed to be done. All agreed that it did. But the political context licensed multiple alternatives regarding what that action should look like, be it gathering information or pursuing aggressive treatment.

Chapter One examined Thabo Mbeki himself. The President is a man who rose to power through shrewdness and study, unaccustomed to the public spotlight. He is also a man who had witnessed all too often the oppressive capabilities of ostensible benefactors and unabashed overlords. He is a man whose one political vision, that of an African Renaissance, a rebirth of the African soul defined as apart from the colonial master, brought him to power searching for new answers to the AIDS epidemic. In Chapter Two, the analysis of Mbeki focused on his transition to AIDS dissent. Superficial readings of Mbeki's argument tempted observers at the time to conclude that he was anti-scientific or ignorant. But by exploring the latent proto-theories of knowledge that were the foundation of his dissent, we saw that Mbeki emerged with an understandable view of science born from his political assumptions and personal history. Mbeki's early defense of speculative AIDS drugs and his fight for parallel importation forced us

to reject the view that Mbeki is reflexively anti-drug. His shocking dissent is properly located in proto-theoretically informed standards of proof, where open debate is an essential prerequisite for a warranted claim to scientific knowledge. It was apartheid and the intransigence of the West that under girded his demands for more study and his protection of dissent. When the dissenters approached him with allegations that they were unfairly silenced and with claims that AIDS science was not nearly as certain as it was made out to be, Mbeki was primed to support these scientific heretics.

As a result, Mbeki embraced dissent as a key component of the knowledge-making process. In the meantime, he would resist disseminating AIDS drugs made available by the West to his country's poor. Mbeki's April 2000 letter is a reflection of the rhetorical context discussed in Chapter One. Apartheid is directly cited in the letter as a warrant for holding scientific evidence to the high standards of proof and in favor of caution over immediate action in response to a public health challenge. His critics had implicit assumptions about what should count as scientific knowledge as well. Their bitter responses to Mbeki were born of an historical relationship with AIDS policy that demanded immediate action. That view was as powerful in the minds of his critics as the legacy of white oppression was in the mind of Mbeki.

In Chapter Three, the AIDS dissenters in the United States were the focus. Rhetors such as Peter Duesberg developed scientific arguments that were the foundation of the President's arguments. Later, popularizers of AIDS dissent, such as Christine Maggiore, added normative elements to AIDS dissent, just as President Mbeki would do some years later. A major theoretical consideration of this chapter was how scientific arguments are adjusted as they migrate between different forums. The chapter began by exploring how the early technical dissenters questioned the science of contemporary retrovirology, how they raised concerns about

the etiology of AIDS and the efficacy of anti-retroviral drugs, even about the very existence of an African pandemic. In the monological format of journals such as The Proceedings of the National Academy of Sciences, the dissenters were able to make uncontested challenges to the certainty of orthodox AIDS science. But when given the chance to respond, such as in Science magazine, the orthodoxy was able to rebut those arguments. This was especially the case when the dissenters were forced to offer alternative views of the etiology of AIDS.

Part of what fueled the orthodoxy's antipathy to the dissenter's claims was an epidemic psychology. After the undue conservatism of Western governments in the 1980's, blaming those who fail to act against the epidemic became common. Popularized accounts of AIDS policy such as And the Band Played On defended this epidemic psychology. As the dissenters attempted to hold AIDS scientists to high standards of proof, too many who had lived through the initial outbreak were reminded of similar calls for more study and caution then. Such calls for delay, in their minds, had led to the deaths of thousands. When the dissenters rejected that "act first" mentality, they were marginalized to the fringes of both scientific and political discourse.

As a result, dissent faded from technical scientific forums. However, it was adopted by lay persons who kept the arguments going. These lay dissenters translated the technical arguments of scientists like Duesberg into ones designed for public consumption, while adding moral arguments to the story. This new dissent was designed especially for the newly diagnosed HIV patient. Christine Maggiore was studied in this dissertation as a paradigmatic example of this popularized AIDS dissent. She is a leading voice of the movement, one who has met personally with President Mbeki. Her book was examined for its discussion of scientific credibility, for its rhetorically invoked compassion for the infected, and for how it defended a strict standard of proof for scientific claims about AIDS. Her debate with Brian Foley was also

examined as textual evidence that enabled a rhetorical analysis of the interaction between dissenting and orthodox arguments in public forums. During her WPDU debate, Maggiore amplified these issues and contrasted them with Foley's orthodox defense of lower standards of proof in public health. Her opponent, after some searching, composed responses that addressed the salient points of clash between the two.

In Chapter Four, the dissertation once again took up a debate between orthodox and dissenting scientists. Mbeki's Presidential AIDS Advisory Panel was his attempt to get to the bottom of the issue by sparking clash on the scientific and political issues involved. The forum was truly unique. Given the specific mandate to maintain neutrality between the two sides, the rapporteurs had to carefully consider their own rhetoric. The Panel's charge to fully review all of the science and its mandate to provide policy recommendations led it to focus specifically on differences between standards of proof and theories of legitimate scientific practice. But no matter how technical the arguments were, issues of public participation, the moral and ethical commitments of the rhetors, and contrasting rhetorical styles all fundamentally shaped the arguments made. In policy relevant science, unmasking background ideological assumptions from both sides is essential to resolving technical scientific issues. That process is rhetorical and involves deliberation.

In Chapter Five we considered our final piece to the rhetorical puzzle, Zachie Achmat and the Treatment Action Campaign. That social movement overcame several constraints to win policy changes and make ARV treatments available in South Africa. The TAC addressed the problem of opposing a popular government. By framing its arguments in terms of the morality of access to AIDS treatments and the need for public participation in health policy formation. The TAC strengthened those arguments by appealing to the legacy of apartheid, the very thing that

had given Mbeki's ANC government so much credibility. This had the effect of making the interests of the infected count in risk calculations concerning ARV drugs. In the courts, the group was able to challenge the government on Constitutional grounds. And when their court victory was not implemented, the TAC turned to limited civil disobedience to push their case. In both instances, the TAC had to balance resistance against the popularity of the government. By shrewdly strategizing where and how to make their arguments, the TAC avoided being lumped together with South Africa's political opposition.

At the end of Chapter Five, though, our story returned back to where it began. Even after the TAC won the promise from the government to roll out ARV drug programs, the National Institute of Health research scandal threw that consensus into jeopardy. The grounds that Mbeki saw for his dissent had never gone away. Once evidence of Western imperialism emerged, the ANC quickly returned to its conservatism in AIDS science. Mbeki's opponents attacked him on the old grounds of his exhibiting callous disregard for the material consequences of his actions, and the same rhetorical battles reemerged. The controversy continues to rage. After this dissertation's development of all of the rhetorical issues in the case of South African AIDS policy, we are now in a position to draw some theoretical conclusions and suggest avenues for further research.

6.2 ASSESSING THE RHETORIC OF BOTH SIDES

One conclusion of this dissertation is a tactical one. Dismissing Mbeki out of hand, as many popular reactions to his arguments did, is counter productive. While AIDS dissenters may be incorrect in their science or even dangerous in their policies, they are not insane. Underlying the

position is a defensible philosophy of science that cannot be rejected *prima facie*. Mbeki's belief that scientific rhetoric should be highly tolerant of dissent is also well taken. Mbeki's cautious approach may well be the best one for many scientific controversies. However, the President's orthodox critics generally refused to acknowledge any merit in his position. By refusing to engage seriously with Mbeki, those who opposed his views made a strategic error. Since Mbeki was holding the reigns of power, he could not be marginalized like dissenters in the United States. Refusing to debate feeds the conspiracy theories of the dissenters, even if those theories are false (Darsey 2002).

But while debate should be encouraged, whether that debate should become a *de facto* filibuster on making effective public policy is another matter. Once the science behind a controversy has had a suitable vetting, a point of action is reached where decisions have to be made. Perpetual debate can never be an option. In the face of a crisis, some change to the status quo is almost always called for, be it a drug treatment program or holistic detoxification. In the United States, that point of action has long since been reached. AIDS dissent was vetted in public forums and found wanting. But that conclusion cannot be applied to other countries and other cultures as a matter of course. Mbeki's dissent was based on different, culturally specific grounds from the American version and required its own debate.

The rhetorical task is to determine when that moment of action has been reached, when the science of a controversy has been debated enough to warrant some policy response. The threshold for that moment is never presupposed, the line is different for every time an issue becomes a controversy. It is the product of the moment, the evidence, the rhetorical skills and status of those advocating where the line should be, and the views of the adjudicators, be they policy makers or the general public. Cultural and ideological factors help draw that line, as do

implicit standards of proof. The line can shift over time in the face of new evidence, changing contexts, and the invention of new arguments. Often, arguments defending this threshold of action are the defining aspect of a science policy controversy. Only by answering that question can anything be done about the problem. Quality public argument would engage this issue overtly.

Both sides in this controversy failed to focus on the issue of when action is warranted. The orthodoxy granted no credibility to Mbeki's arguments about preserving cultural identity and the necessity of high standards of scientific proof. The President did not understand the lessons of inaction in the West or how deeply the orthodoxy felt the moral need to prevent the spread of the AIDS epidemic. In either case, resolving the dispute rhetorically would have required specific attention to these points of disagreement. Rather than defend one's own view of when action is warranted, one must argue for a particular moment for action in relation to the other side's view. Mbeki's apartheid arguments had to be juxtaposed to the epidemic psychology in order to see which was preferable. On the other hand, the orthodoxy assumed that everyone had to view AIDS science in the way it had. In Mbeki's post-apartheid worldview, the credentials of Western scientists are not enough to bring closure to the debate. The orthodoxy must also defend its views on AIDS policy as contrasted with Mbeki's position. Contrasting the two views against one another is the only way to evaluate them as alternative answers to the same questions of how scientific knowledge should be evaluated.

Of course, having this debate need not foreclose action. It is possible to implement policies at the same time that this debate takes place. At the point that his country's court system, important domestic figures and social movements, and almost the entire international community of politicians and scientists recognized the need to act against AIDS in South Africa, Mbeki's

conservatism in science policy seemed overzealous. Mbeki could be correct that historical examples of Western imperialism on the continent suggest that the final chapter on AIDS in Africa has not been written. There is nothing preventing Mbeki from forming panel after panel to continually question the assumptions of AIDS science. But one can recognize the contingency of currently accepted science while at the same time making a strategic decision to act on it. Certainly the sheer volume of support for orthodox AIDS science grants it some presumption in this debate. Mbeki attempts to elevate tolerance of dissent over the lives of his people. To my mind, this position is morally untenable. For this reason, he both has the weaker argument and is worthy of censure.

6.3 THE DISSERTATION WITHIN THE RHETORIC OF SCIENCE

This dissertation is designed as a contribution to the rhetoric of science. Dilip Gaonkar (Gaonkar 1997) has famously critiqued that field. Responding to his challenges can help situate a work within the field. I maintain that this dissertation avoids much of his critique and provides an example for developing a robust rhetoric of science focused on science policy. Gaonkar argues that using rhetoric as an interpretative tool for scientific texts is troublesome. In that process, rhetoric is stretched far beyond its ancient origins in the production of deliberative, forensic, or epideictic speeches. Rhetoric is essentially productive and at best superficially suited to criticizing contemporary texts (including scientific texts in Gaonkar's estimation). He believes rhetorical theory is too "thin" to produce substantial criticisms of them. Rhetoricians of science compensate for that thinness by co-opting philosophies of science or sociological theories of scientific knowledge that share their own epistemological assumptions. Because other fields have

attacked the certainty of science knowledge in recent decades, rhetoricians of science see fit to adopt those theories as their own. In so doing, they lose touch with the productive core of rhetoric. Without that core, Gaonkar believes, rhetoric loses its ability to make original contributions to scholarship. Therefore, the rhetoric of science either becomes a superficial application of the tools suited for the ancient world onto contemporary phenomena (thinness), or else it offers few unique insights from other critical studies of science (globalization).

The argument will be clearer through specific references to the rhetoric of science literature. Gaonkar indicts Wander's (Wander 1976) early explication of the rhetoric of science as failing to contribute in a substantial way to our understanding of the subject. "Wander's claims that the scientific 'research report' is a persuasive document addressed to a historically specific audience is based on a mundane view of how scientists (like any other mortals) communicate, rather than fashioned out of a special theory of scientific knowledge production" (43). In Gaonkar's estimation, Wander's criticism may be accurate, but it is also banal and does little to justify a distinct sub-discipline. On the other hand, reaching out to other theorists in order to "thicken" rhetorical theory is no saving grace either. Gaonkar favorably cites Trevor Melia's critiques of the attempt to link rhetoric of science with other scientific theories. Melia argues that the epistemic ruptures in contemporary science brought about by the work of "Kuhn, Feyerabend, Hanson, Polanyi, Bohm, et. al." (46) had nothing to do with rhetoric and offer no foundation for a rhetoric of science. He resists the move to see philosophers of science as rhetoricians in sheep's clothing. "To the best of my knowledge, none of these masters (and the list is formidable: Kuhn, Feyerabend, Gadamer, Habermas; Toulmin is the possible exception) so far has either conceded that what they have been doing all along is a form of rhetorical reading, or gone on to incorporate rhetorical vocabulary in their subsequent work" (74). Trying to

“rhetoricize” these thinkers, bringing them into the rhetorical canon, does little but re-label them, often against their will. The move is nominal, contributing nothing. By this critique, rhetoric of science expands rhetorical theory to the point where it is indistinguishable from philosophy of science. Gaonkar presents many other examples where he sees this hollowness of the rhetoric of science at work.

In Gaonkar’s judgment, the product of the recent history is rhetoric of science in a “humanist paradigm.” He writes:

The humanist paradigm is based on a reading of classical texts, especially those of Aristotle and Cicero, and its governing feature is the positioning of the rhetor as the generating center of discourse and its “constitutive” power. The rhetor is seen (ideally) as the conscious and deliberating agent who “chooses” and in choosing discloses the capacity for “prudence” and who “invents” discourse Within such a paradigm, while one does recognize the situational constraints, including the specificity of the audience addressed, they are, in the last instance, so many items in the rhetor’s design. The agency of rhetoric is always reducible to the conscious and strategic thinking of the rhetor (48-49).

Unable to appeal to a more robust theory of science, the rhetorician of science is left with an unreformed, humanist conception of agency. Gaonkar goes on to offer critiques of this view of agency as naïve.

At first glance, this dissertation may appear to be susceptible to Gaonkar’s critique. Certainly, high levels of agency were ascribed to the various actors in each chapter as they negotiated the contextual constraints before them. But does that mean that this dissertation’s analysis is thin, generic, or unsophisticated? Only if the constraints encountered by those rhetors

are seen as window dressing, easily swept aside by the power of invention alone. On the contrary, in this dissertation the context of South Africa has taken center stage. Over time, all of the rhetors were forced to adapt their own arguments to the limitations of genre, the cultural context, and of their respective audiences. Rather than a story of robust agents trumping context, the dissertation has shown the actors to be continually bound by their own history, almost to the point where the rhetoric cannot escape that context. Agency has not vanished, but it is not blindly asserted either. Both the production and the evaluation of scientific arguments is trapped in multi-layered contexts of history, differing forums, and competing strategic goals.

As for theoretical thinness, this dissertation's specific focus on public policy has avoided this charge. Making decisions based on imperfect knowledge through deliberation is exactly the sort of thing that even Aristotelian rhetoric addresses. Gaonkar's criticism of globalized rhetoric of science would perhaps apply if this was a dissertation only about AIDS science. But once that controversy enters the public and questions of policy arise, then a rhetorical analysis of such a case is not globalized at all. If rhetoric can robustly contribute to anything it ought to do so in institutions such as to Parliament or the courtroom. Even the technical forums discussed in this dissertation, the Presidential AIDS Advisory Panel of Chapter Four for example, became deliberative once they were charged with making policy recommendations. The moral arguments that emerged under this task are rhetorical through and through. This dissertation has focused specifically on the ways that the competing claims of retrovirology and its dissenters have been used to make policy and political arguments.

Answering Gaonkar's criticisms allows us to situate the dissertation within the field. The rhetoric of science can be marked in one sense by what type of rhetoric it studies. Secondly, the theoretical commitments the work carries also distinguish various rhetorics of science. This work

is rather traditional in both respects. The South Africa AIDS controversy is classically rhetorical, looking primarily at public argument and deliberation. And the theory developed here is narrowly focused on the question of how to evaluate uncertain arguments at times of action. While not a repudiation of more novel rhetorical approaches to scientific texts, the dissertation is an implicit argument for carefully constructing scholarship so as to maximize the heuristic value of the rhetoric of science.

6.4 INTERCULTURAL RHETORIC OF SCIENCE

The dissertation contributes to other areas of rhetorical studies as well. Studying intercultural argumentation and rhetoric is a common site for scholarship (Blake 1979). But intercultural rhetorics of science are rare. One of the few scholars working in this area is Xiaosui Xiao (Xiao 1996). He examines, among other things, the reception of Darwin in China. Xiao argues that evaluating scientific arguments across cultures is not just a matter of objectively weighing evidence. The critic must also be sensitive to specific cultural dynamics such as history and conceptions of morality. A recent Quarterly Journal of Speech article by Xiao (Xiao 2004) notes recent trends in the rhetoric of science that have begun to emphasize the contextual dynamics of how science is judged rhetorically. “This approach to the rhetoric of science, however, has not gone much beyond the contexts of Western cultures, although many of the typical cases for the rhetorical study of science . . . have had worldwide influence” (470). Xiao describes the importance of addressing the interface between Western science and non-Western audiences. His study of the relationship between Chinese Dao-Discourse and Darwin in the 1920’s explores how arguments that require high science literacy to be understandable are received differently in

China. In these contexts, strategic cultural adaptation is required for the scientific arguments to take hold. “Scientific ideas must be rhetorically reconstructed so they will fit into the cultural structure of the dominant discourse before they can make their way into the dominant discourse of that culture” (484). This rhetorical alteration significantly changes the scientific arguments.

This dissertation answers Xiao’s call for more intercultural rhetoric of science scholarship. It also offers a different context in which to assess the reception of scientific rhetoric in non-Western nations. Certainly, folk knowledge developed outside of a Western scientific context is an important element in the understanding of AIDS by the South African citizenry. But President Mbeki, as we have seen, is thoroughly immersed in the Western scientific tradition and embraces Western dissent as warrant for his AIDS policies. He is not *adapting* Western science to fit the dominant discourse of South Africa. Instead, he is using the political history of South Africa to render a judgment about Western science. There is a difference in cultural perception, but it is more subtle than the kind Xiao describes. A vibrant intercultural rhetoric of science must pay special attention to social dynamics that force the adaptation and assessment of scientific arguments. Scientific arguments will be assessed differently in China than in Brazil or India. And specific debates will develop differently in each context, for example, since AIDS science has an impact on sexual practice, it will likely be judged differently than military science or food science. Appreciating the unique aspects of a non-Western culture are fundamental to examining scientific rhetoric across nations and cultures.

But this cultural analysis cannot be limited to the non-Western part of the equation. This dissertation also focused on the cultural constraints operating in the dominant, orthodox discourse. These elements can make it difficult for scientists to adapt their arguments to new audiences. The cultural constraints of the orthodoxy can also fuel subsequent critique as

backwards of those reluctant to adopt Western theories. An analogue for the focus on the rhetoric of scientific orthodoxy in this dissertation may be the rhetorical analysis of “whiteness” as a cultural category. Nakayama and Martin (Nakayama 1999) shed light on the rhetorical function of whiteness, since that category is often taken for granted given its centrality and dominance. “We need to expose whiteness as a cultural construction as well as the strategies that embed its centrality” (95). Scientific orthodoxy as well is a cultural construction, operating implicitly in the rhetoric of Mbeki’s critics. Its own centrality and dominance may trick us into ignoring its influence on rhetoric. A truly *intercultural* rhetoric of science would expose constraints on the rhetoric of both sides of a given controversy.

6.5 CALL FOR FURTHER CASE STUDIES

The dissertation is applicable to other contexts in which AIDS dissent may emerge. Assuming that AIDS will continue to spread throughout the world, the clash between conservatism and the epidemic psychology that we have seen in South Africa is quite likely to occur elsewhere. For instance, take Asia. International attention has recently turned to it as the next site for a precipitous rise in AIDS infections. Orthodox scientists and politicians are once again issuing predictions of a pandemic. “With one in four new HIV cases being reported from Asia, the sprawling continent is on the verge of an AIDS epidemic that could dwarf the devastation wrought by the killer disease in Africa, experts are warning” (Macan-Markar 2004). In a speech at the Fifteenth AIDS Conference in Bangkok in 1994, UN Secretary General Kofi Annan urged emergency responses to the diseases (McGirk 2004). These included an increase in HIV testing, the regulation of the commercial sex industry, and needle exchange programs given the

continent's high rate of intravenous drug use. While the policy prescriptions may be different than those offered in South Africa, the argumentative tone is the same; act now or the death toll will mount. Asia has been more willing to dispense drugs than South Africa, but other health policies may not be adopted swiftly enough for the West's liking.

The time frame arguments that were used in Africa are routinely deployed in Asia. “‘Asia is facing life and death choices when it comes to the epidemic,’ Kathleen Cravero, deputy executive director of UNAIDS, told reporters in Bangkok. ‘We have a real window of opportunity, particularly in Asia, if we don’t take it, it will slam shut forever. If we miss it we will see an epidemic the likes of which we have never imagined despite what we have seen in Africa’” (Peachey 2004). The epidemic psychology has migrated to Asia. It will inevitably clash with local assumptions about politics, science and health, and historical relations with the West.

For example, it was only last year that China agreed to acknowledge AIDS as a problem. As The Lancet put it, “After a decade of covering up the spread of HIV/AIDS, the central government promised last week to provide free HIV tests to everybody and to fully cover the treatment costs of poor patients” (Watts 2004). These changes, like those in South Africa, were partially the result of domestic protest against a reluctant government (I-han Chou 2004). Recent history as well may have convinced the Chinese government to be more proactive in their response to AIDS. The effects, both human and economic, of the recent outbreaks of SARS and the Asian Bird Flu have aided those who call for massive development of China's health care infrastructure. Analyzing the rhetoric of AIDS policy in China would be a fascinating extension of this dissertation's analysis in South Africa.

In India as well, questions of what policies to implement concerning AIDS abound. India was once one of the chief manufacturers of the generic AIDS drugs that are more easily

affordable than the brand-name American drugs. Mbeki's attempt to import these drugs in violation of patent protections was a major moment in the formation of his AIDS dissent (see chapter 2). But recently, the Indian government has changed its own patent laws to even more stringently regulate knock-off drugs than the TRIPS sections of the WTO agreement prescribed (Chatterjee 2005). The goal is to spur domestic research and the development of new, patented AIDS drugs that can then be sold at much higher profits than the current generic versions India produces. Critics worry that India's decision will make cheaper AIDS drugs less available.

At the same time, India has been criticized for making ARV drug treatments available too aggressively. Often times they are free to children under-fifteen and their parents, dramatically increasing their availability. Some charge that the government bowed to international and domestic pressure to distribute the drugs without a plan of how to pay for them and without the necessary healthcare infrastructure in place to prevent drug resistance (Lancet 2003). India's growing technological and biomedical industry, as well as its skyrocketing AIDS infection rates, produced a series of policy choices that are, like all the others, culturally specific. The rhetoric deployed to make these decisions should provide material for important critical work in the intercultural rhetoric of science.

The dissertation also provides a roadmap for the study of scientific controversies other than AIDS policy, or even biomedicine. Wherever policy questions come into a scientific debate, there will always be moments when action must be weighed against the desire for further evidence. In democracies, public debate will erupt over where that line should be drawn. A cursory review of current science policy controversies sees this rhetorical question everywhere. Global warming, electromagnetic fields, cell phone use and cancer, all manner of debates over particulates and carcinogens in the environment, stem cell research, alternative energy policy,

and cloning all involve one side arguing for further study and the other side claiming that the costs of delay are too great.

One example is the international debates over the use of genetically modified foods (GMFs). The United States, Canada, and Argentina challenged the European Union in 2003 over its moratorium on the importation of GMFs on the grounds that it violated WTO regulations (Koffler 2003). In Europe, policy reflects a strong cultural bias against GMFs. However, in the United States the use of such foods is common. Caught in the crossfire of the dispute is Africa. Some African nations have refused to accept modified American food aid, mirroring the objections of many European governments about their safety and nutritional value (Diamond 2002). Do we know enough about GMFs to introduce them into our food chain? And to what extent is American food aid an attempt to make Africa dependent on GMFs or open up markets for trade? Dealing with many of the same issues that we addressed in this dissertation in connection to South African AIDS policy, citizens and policy makers debate these and other questions.

Examination of different cases to determine the ways that charges of scientific uncertainty on one side and the pressure to act on the other influence the rhetoric of science policy could lead to a more general theory of those argumentative contexts. Such a theory would isolate common rhetorical issues in policy relevant scientific controversies and note their application in specific debates. Critics could then garner a better understanding of how claims to scientific knowledge shift once policy questions arise. The theory would therefore be rooted in the tradition of deliberative rhetoric but speak to the increasingly high stakes of crafting science policy in a context of globalization and technological development. The attention paid to one example of that process in this dissertation has furthered our understanding of the rhetoric AIDS

policy in South Africa. While the resolution of that controversy is uncertain, the role of rhetoric and culture in its development is indubitable.

APPENDIX

THABO MBEKI'S LETTER TO WORLD LEADERS

I am honoured to convey to you the compliments of our government as well as my own, and to inform you about some work we are doing to respond to the HIV-AIDS epidemic.

As you are aware, international organizations such as UNAIDS have been reporting that Sub-Saharan Africa accounts for two-thirds of the world incidence of HIV-AIDS. These reports indicate that our own country is among the worst affected.

Responding to these reports, in 1998, our government decided radically to step up its own efforts to combat AIDS, this fight having, up to this point, been left largely to our Ministry and Department of Health.

Among other things, we set up a Ministerial Task Force against HIV-AIDS chaired by the Deputy President of the Republic, which position I was privileged to occupy at the time.

Our current Deputy President, the Hon. Jacob Zuma, now leads this Task Force.

We also established Partnerships against AIDS, with many major sectors of our society including the youth, women, business, labour unions and the religious communities.

We have now also established a National AIDS Council, again chaired by the Deputy President and bringing together the government and civil society.

An important part of the campaign that we are conducting seeks to encourage safe sex and the use of condoms.

At the same time, as an essential part of our campaign against HIV-AIDS, we are working to ensure that we focus properly and urgently on the elimination of poverty among the millions of our people.

Similarly, we are doing everything we can, within our very limited possibilities, to provide the necessary medicaments and care to deal with what are described as "opportunistic diseases" that attach to acquired immune deficiency.

As a government and a people, we are trying to organize ourselves to ensure that we take care of the children affected and orphaned to AIDS.

We work also to ensure that no section of our society, whether public or private discriminates against people suffering from HIV-AIDS.

In our current budget, we have included a dedicated fund to finance our activities against HIV-AIDS. This is in addition to funds that the central government departments as well as the provincial and local administrations will spend on this campaign.

We have also contributed to our Medical Research Council such funds as we can, for the development of an AIDS vaccine.

Demands are being made within the country for the public health system to provide anti-retroviral drugs for various indications, including mother-to-child transmission.

We are discussing this matter, among others with our statutory licensing authority for medicines and drugs, the Medicines Control Council (MCC).

Toward the end of last year, speaking in our national parliament, I said that I had asked our Minister of Health to look into various controversies taking place among scientists on HIV-AIDS and the toxicity of a particular anti-retroviral drug.

In response to this, among other things, the Minister is working to put together an international panel of scientists to discuss all these issues in as transparent a setting as possible.

As you know, AIDS in the United States and other developed Western countries has remained largely confined to a section of the male homosexual population.

For example, the cumulative heterosexual contact, US percentage for AIDS cases among adults/adolescents, through June 1999 is given as 10 percent. (HIV-AIDS Surveillance Report: Midyear edition. Vol 11, No 1, 1999. US Department of Health and Human Services).

The cumulative absolute total for this age group is reported as being 702,748.

US AIDS deaths for the period January 1996 to June 1997 were stated by the US CDC as amounting to 32,750. (Trends in the HIV and AIDS Epidemic: 1998. CDC).

On May 13, 1999, a SAFA-AFP report datelined Paris stated that 1998 UNAIDS and WHO reports had said that AIDS was responsible for one death in five in Africa, or about two million people.

It quoted a Dr. Awa Coll Seck of UNAIDS as saying that there are 23 million carriers in Africa of HIV.

This SAFA-AFP report quotes Dr. Coll Seck as saying: "In Southern Africa, the prevalence of the (HIV) infection has increased so much in five years that this region

could, if the epidemic continues to spread at this rate, see its life expectancy decline to 47 by 2005.”

(Interestingly, the five years to which Dr. Coll Seck refers coincide closely with the period since our liberation from apartheid, white minority rule in 1994).

The report went on to say that almost 1,500 people are infected in South Africa every day and that, at that point, the equivalent of 3.8 million people in our country carried the virus.

Again as you are aware, whereas in the West HIV-AIDS is said to be largely homosexually transmitted, it is reported that in Africa, including our country, it is transmitted heterosexually.

Accordingly, as Africans, we have to deal with this uniquely African catastrophe that:

contrary to the West, HIV-AIDS in Africa is heterosexually transmitted;

contrary to the West, where relatively few people have died from AIDS, itself a matter of serious concern, millions are said to have died in Africa; and,

contrary to the West, where AIDS deaths are declining, even greater numbers of Africans are destined to die.

It is obvious that whatever lessons we have to and may draw from the West about the grave issue of HIV-AIDS, a simple superimposition of Western experience on African reality would be absurd and illogical.

Such proceeding would constitute a criminal betrayal of our responsibility to our own people. It was for this reason that I spoke as I did in our parliament, in the manner in which I have indicated.

I am convinced that our urgent task is to respond to the specific threat that faces us as Africans. We will not eschew this obligation in favour of the comfort of the recitation of a catechism that may very well be a correct response to the specific manifestation of AIDS in the West.

We will not, ourselves, condemn our own people to death by giving up the search for specific and targeted responses to the specifically African incidence of HIV-AIDS.

I make these comments because our search for these specific and targeted responses is being stridently condemned by some in our country and the rest of the world as constituting a criminal abandonment of the fight against HIV-AIDS.

Some elements of this orchestrated campaign of condemnation worry me very deeply.

It is suggested, for instance, that there are some scientists who are “dangerous and discredited” with whom nobody, including ourselves, should communicate or interact.

In an earlier period in human history, these would be heretics that would be burnt at the stake!

Not long ago, in our own country, people were killed, tortured, imprisoned and prohibited from being quoted in private and in public because the established authority believed that their views were dangerous and discredited.

We are now being asked to do precisely the same thing that the racist apartheid tyranny we opposed did, because, it is said, there exists a scientific view that is supported by the majority, against which dissent is prohibited.

The scientists we are supposed to put into scientific quarantine include Nobel Prize Winners, Members of Academies of Science and Emeritus Professors of various disciplines of medicine!

Scientists, in the name of science, are demanding that we should cooperate with them to freeze scientific discourse on HIV-AIDS at the specific point this discourse had reached in the West in 1984.

People who otherwise would fight very hard to defend the critically important rights of freedom of thought and speech occupy, with regard to the HIV-AIDS issue, the frontline in the campaign of intellectual intimidation and terrorism which argues that the only freedom we have is to agree with what they decree to be established scientific truths.

Some agitate for these extraordinary propositions with a religious fervour born by a degree of fanaticism, which is truly frightening.

The day may not be far off when we will, once again, see books burnt and their authors immolated by fire by those who believe that they have a duty to conduct a holy crusade against the infidels.

It is most strange that all of us seem ready to serve the cause of the fanatics by deciding to stand and wait.

It may be that these comments are extravagant. If they are, it is because in the very recent past, we had to fix our own eyes on the very face of tyranny.

I am greatly encouraged that all of us, as Africans, can count on your unwavering support in the common fight to save our continent and its peoples from death from AIDS.

Please accept, Your Excellency, the assurance of my response.

THABO MBEKI

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